

This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

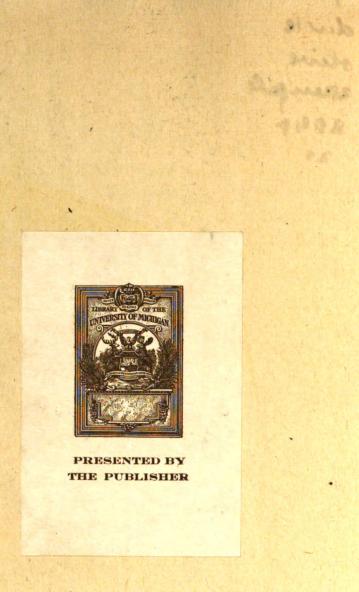
- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + Refrain from automated querying Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

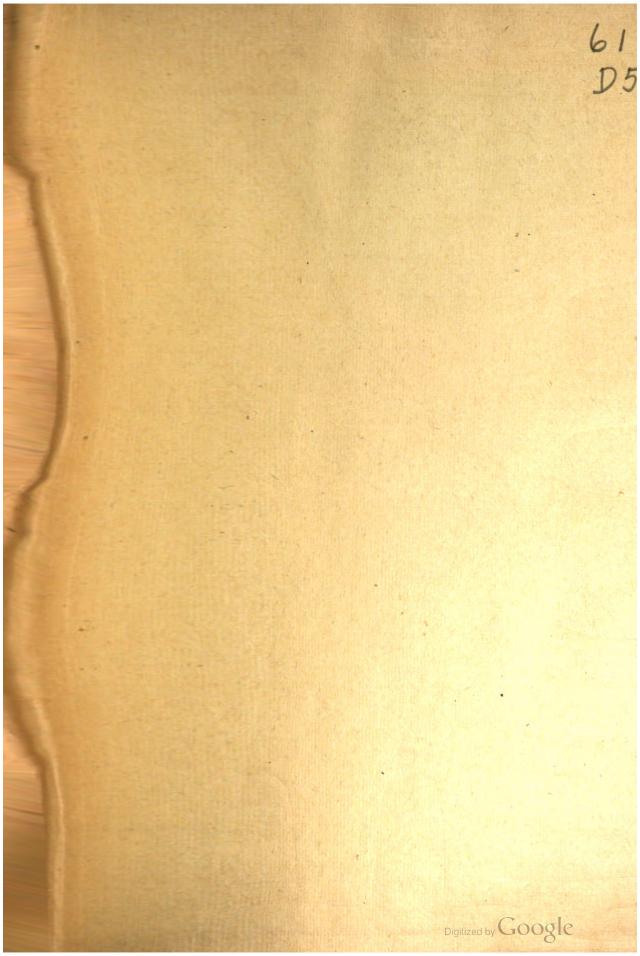
About Google Book Search

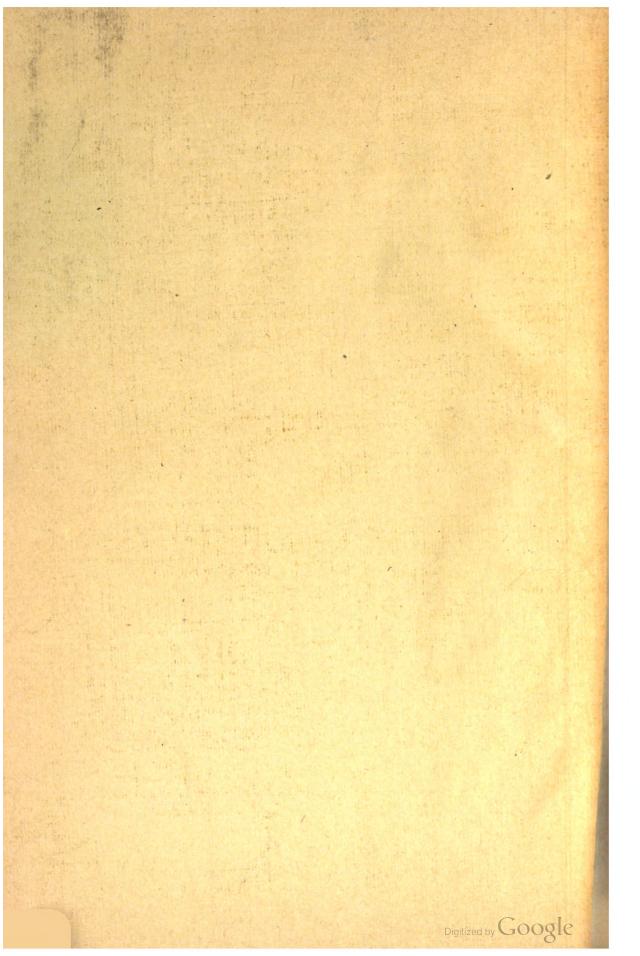
Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at http://books.google.com/



Dietetic and Hygienic Gazette







LXXX No. 1

JANUARY, 1914

THE

NETETICAND HYGIENIC

GAZETTE

MEDIC MEDIC

PUBLICATION OFFICES

87 Nassau St. -

New York

\$1.00 Per Annum. 15c. Per Copy.

Entered as Second-Class Matter at the New York Post Office.

CONTENIS ONTEACHERILE

Digitized by Google

The best antiseptic for purposes of persunal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teet.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched

ondition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY LOCUST AND TWENTY-FIRST STREETS # # ST. LOUIS. MO.

AC A

VAGINAL DOUCHE CHINOSOL

(Accepted by the Council on Pharm. and Chem., A. M. A.)

MORE THAN SUPPLANTS BICHLORIDE BECAUSE

CHINOSOL

- IS A MORE POWERFUL ANTISEPTIC
- IS POSITIVELY NON TOXIC
- IS ABSOLUTELY NON IRRITATING DOES NO DAMAGE TO MEMBRANES

If mistaken for a "headache tablet", no tragedy can result.

CHINOSOL CO.
PARMELE PHARMACAL CO.
54 SOUTH ST., N. Y.

Digitized by Google

THE

DIETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A.M., M.D.

Vol. XXX.

JANUARY. 1914

No. I

EDITORIALS.

SALUTATORY 1914.

CICERO declared, before the birth of Christianity, salus populi suprema lex; modern sanitation can, if given free scope, vouchsafe the public health. In ways most necessary to humankind is preventive medicine "making good." Through twenty centuries and up to Pasteur, a short generation ago, Cicero's words were hardly more than a rhetorical sentiment. Pasteur demonstrated beyond peradventure that germs are the essential causes of the infectious diseases, and declared that it is within human power to banish all such from the face of the earth. Koch and his co-workers based upon Pasteur's findings the science of Preventive Medicine, to-day the most pervasively beneficent agency within human experience. Personal, domestic, school and communal hygiene, as the terms are now understood, are derived from that noble science.

Infants no longer die through dispensations of Providence, but by milk demonstrably laden with disease germs. Only by reason of crass obduracy are many infections now endured. Preventive Medicine is adequately equipped to cope with housing, sewage, filtration—all the problems affecting life conservation, that enter into well nigh every phase of our infinitely complex civilization. And since many infections, such as tuberculosis and malaria, occasion tremendous material losses, preventive medicine has become a vital factor in sociology and economics.

Indeed, the greatest and wisest statesmen have been, and are, realizing how Preventive Medicine has for its objects to curtail and, if possible, to obviate disease, to prolong life, and through improved conditions to make existence happier. Lecky observed: "The great work of sanitary reform has been perhaps the noblest legislative achievement of our age; and, if measured by the suffering it has diminished, has probably done more for the real happiness of mankind than all the many questions that make and unmake ministres."

And Dr. Eliot, of Harvard has written: "Preventive Medicine is capable in the future of doing away with poverty and misery, of remedying industrial disputes and of contributing to the cause of international peace. It is capable of removing those causes of human misery, poverty and sorrow which lead to internal rebellion and disorder and, among nations, to war and strife.

Nor is preventive medicine content to deal only with material diseases; it rightly concerns itself with mental hygiene and the assurance of a normal posterity—that is, eugenics.

It should now be observed that henceforth we don't expect to deal much with sex pathology; in point of fact we beg to set down here, with the endorsement "Them's our sentiments," the following from the New York Times: "In the campaign of filth, out of which no good can come, 'literature,' and that sometimes bearing the im-

Digitized by Google

print of respectable publishing houses, has borne its part, and the detestable 'sociological' conferences, attended by the young and old of both sexes, have done more than the worst plays to break down the barriers of restraint and destroy good manners."

The field of preventive medicine is indeed vast, constantly widening, and most fruitful; in it, through thirty years past, the DIETETIC AND HYGIENIC GAZETTE has worked, mostly as a gleaner. It is a most congenial field; and we look forward with the utmost gratification to continue working in it; to be as useful as we can in it; and with the hope that when our mantle must, in the course of inexorable nature, be transferred to others' shoulders, we shall not be deemed to have worn it unworthily.

FULL TIME PROFESSORS.

THE General Education Board has, by its gift of \$1,500,000 to the Johns Hopkins University Medical School, enabled that institution to work a now long cherished reform in the organization and teaching of the main clinical branches in this institution. The fund is to be named the William H. Welch Endowment for Clinical Education and Research in honor of its professor of pathology; and the trustees of that University are increstricted in the application of the income. Hopkins will now be able to reorganize its departments of medicine, surgery and pediatrics so that the professors and their chief assistants will receive adequate salaries and will be relieved of the necessity of practicing privately; they will give their whole time to education and research. Should the plan work well it will be extended to the departments of physiology, anatomy, pharmacology and pathology. And here, surely, regarding the latter subjects, were a consummation devoutly to be wished; for the work in them is peculiarly con amore, work to which private practice is not likely to be so adjuvant as in the departments of medicine, surgery and pediatrics.

There have heretofore been very few "full time professors" in medical education. The pediatrics department, of which the head is Dr. John Howland, will be the first to be effected. Next will probably come surgery, under Dr. William S. Halstead; and then medicine, under Dr. Lewellys F.

Barker. It has not yet become fully known whether these physicians will feel themselves able to go on a full term basis. It is thought the salaries will be between ten and fifteen thousand dollars. But that is not now considered the main point. Dr. Welch is reported as saying: "We don't want men who are thinking of salaries only; we want men who will be willing to make sacrifices for research." Of course the services of such men as Dr. John Miller Turpin Finney, Dr. Howard A. Kelly and Dr. Joseph C. Bloodgood will in any event be retained; they will continue with the Medical School as at present. They may be eventually offered positions under this plan; but, if they should not accept, other men in their departments will be made full time assistants, and will devote themselves exclusively to the University. Of course, the full time professors will be unrestricted in seeing private patients, but their work will be done in the hospital; and professional fees for such services will go to the University to further teaching and research. For the present at least there will still be room and need in the Medical School and Hospital for teachers and physicians who are partly engaged in private practice. The teaching of the specialties is not affected by the new plan. The influence of the full time system as applied to the other departments, however, cannot fail to be beneficial upon the whole Medical School and its organization."

MEDICINE HATH HER VICTORIES.

THE Rockefeller Institute for Medical Research has, in its brief existence of scarce a decade, and from its beginning under the Directorship of Dr. Simon Flexner, given to the world work extraordinarily fruitful. Within its walls has Dr. Flexner perfected a serum curative of cerebrospinal meningitis, one of the most dreadful and fatal of diseases affecting humankind, especially little children. Dr. Meltzer, among much else that is superb, has developed the intratracheal insufflation by which are resuscitated those seemingly dead for hours, from drowning or from noxious fumes. Dr. Carrel, (a Nobel prize winner) has not only maintained life in vital tissues (as the heart and the kidney) many months after its removal from the body; but in September last he published his demonstration of cellular growth and multiplication apart from its organism, a work pregnant with possibilities for the repair of tissues and organs by surgical procedures. At the same time Dr. Hideyo Noguchi (to whose credit is much other notable work—as the assistance he gave Dr. Ehrlich in the preparation of salvarsan, one of the several surest of curative

agencies)-Noguchi discovered the germ responsible for the development of rabies or hydrophobia, by which discovery this dreadful disease will henceforth without peradventure be recognized and by which a curative agency may be evolved. (The Pasteur inoculations against rabies are a most effective immunizing agent, but they are powerless when the disease is once established; how earnestly is then a cure to be hoped for, since hydrophobia, the sufferings from which are exceeded in no other disease, has when once established in the system, a mortality of one hundred per cent.) And now, a month after the announcements of Carrel and Noguchi, comes another epochal one, that of Flexner and Noguchi's demonstration of the essential germ of infantile paralysis (epidemic poliomyelitis), the acute infection from which children if they do not die, are nevertheless like to grow to maturity with groups of muscles irreparably flaccid or with entire limbs wasted or functionless; by this discovery again, will infantile paralysis be diagnosed beyond error, and a curative serum confidently hoped for.

WOMEN AND CHILDREN IN COTTON MILLS.

Dr. Arthur H. Perry studied the Causes of Death Among Women and Child Cotton Mill Operatives, and gave his results in Vol. 14 of Senate Document No. 645 of the Second Session of the Sixty-first Congress. In his investigation he employed the "death rate method": and he formed a comparison of the mortality of employees in the three great cotton mill centres of the East (Fall River, Mass., Manchester, N. H., and Pawtucket, R. I.) with the mortality prevailing in similar age and sex conditions outside that industry. He chose the age period 15-44 years, because it represents full industrial activity when the death rate would normally be low; represents one-half the entire population, thus giving a very wide range of study; and comprises 85 per cent. of the

entire operative population-whilst within its limits are 76 per cent. of the entire number of tuberculosis deaths from ten years of age on, 73 per cent. of the whole operative mortality from all causes, and 91 per cent. of the entire operative mortality from tuber-Cotton mill work, studied because it engages more women and children than any other industry, exhibits a deplorably high female death rate, and, more frequently perhaps than any other industry, compels its workers to inhale irritant vegetable dust-which is peculiarly conducive, in the overworked and the underfed, to tuber-And tuberculosis (consumption) was selected for study because it is the most prevalent ultimate or immediate cause of death within the 15-44 age period.

Perry's job was a pretty thorough one, all explained in a most interesting volume of 430 pages; and humanitarians, sanitarians and some real statesmen are thinking hard over certain points this doctor has pretty well clinched, as: The death rates of male non-operatives exceeds those of female nonoperatives by 22 per cent.; but the death rates of female operatives exceeds those of male operatives by 33 per cent., despite the former averaging younger. Again: Female operatives have a death rate of more than twice that of non-operatives of their own sex, in some age and race groups many times as high, in the years from 35 to 44 five times as high. And Dr. Perry's conclusion is that operative work is prejudicial to the health of females; that the combination of operative work with matrimony is especially harmful; and that, whilst the general hazard of the female operative is greater than that of the non-operative, the former is in most danger

from tuberculosis. The further conclusion looks as if it were justified, that whilst there has long been a suspicion that a cotton mill is hardly the health resort some mill owners would claim it to be, Dr. Perry's Report demonstrates such working places might more justly be called death resorts. And this Report all the more abundantly justifies satisfaction in the coming reduction of our tariff, an institution fulsomely held through so many dreary years to exist fundamentally for the fostering of the physical and material welfare of the working people; but which, by increasing enormously the cost of the things which the poor must buy, whilst pari passu building up vast individual fortunes, has become in New England, as in Pittsburgh and elsewhere, where protection has so conspicuously demonstrated its blessings, an instrument conducive in reality to human distress and undoing, and to death long before the term natural to humankind.

THE PESSIMIST AND LIFE EXPECTANCY.

In the Life Table for New York City recently issued by its Department of Health, it was shown that, whilst life expectancy for infancy and childhood has greatly increased, that for after forty has diminished, as compared with the calculations issued by Dr. Billings in 1883. This has moved the "knocker" to observe that we now save our young people from tuberculosis in order that they may die after forty from the degenerative diseases; furthermore, that the humanitarian is mistaken in his now eminently successful efforts to prolong the lives of human weaklings beyond infancy, because the latter's below-par bodies will later become unable to resist the pathological processes that begin to manifest themselves after two score—the terminal diseases resulting from the failure of important organs (especially in those thus predisposed) to maintain their The answer to this survival of the fittest claim is, obviously enough, that if there is to be no tender solicitude for the afflicted child we must logically go back to

savagery as the ideal human state, and that the wille zum guten, altruism, Christianity itself have been and are colossal errors. But who are the fit, anyway? Only those physically so? Is the spiritual in existence to be ignored? Such were indeed a wofully lopsided philosophy. Many a useful man (the biographical dictionaries teem with the names of them) has been un-healthily born and has had his infant life hanging many days by a thread, until the scale has turned existenceward, with results vastly profitable and beneficial to his kind. The life expectancy of such an one may not have been worth any "practical man" taking a flyer in him. He may never have seen anywhere near forty. But in his brief span he has ineffably and most comfortingly impressed himself upon his day and generation. Hundreds of the world's geniuses and compellers have died before thirty-five of the one disease, tuberculosis. For us certainly it was good that they lived at least the half of three score and ten. Manifestly, length of days is not as important as how they have been lived.

INSPIRED GENIUS AND ITS WAYS OF WORKING.

A great sculptor once had his soul so saturated with a wonderful sunset-its softness, its calm, its quiescent and gradual change of coloring and its peace-suffusing quality—that he wanted to portray it; but he was no painter. So instead he wrought in marble a little child asleep; and this he did so successfully that people contemplating the equanimity and trustfulness in its infant countenance, the stone that seemed almost to be respiring, declared that it put them in mind of a sunset and were bettered accordingly. So also Harper's Weekly relates how "fifty years ago a boat builder (this is imagined for the facts are not known nor do they in the least matter, since they 'have nothing at all to do with the case') was profoundly moved by a queenly, a soul compelling, and a good-diffusing woman; but he was no poet and could not manifest his devotion in rhyme and rhythm. Yet his imperative ambition was to interpret his inspiration into something that might in turn benefit the world. So he built a poem: he designed a most beautiful white vessel with exquisitely graceful lines; and he named her the Mary Powell. And so transcendently delightful was that vessel, when outlined

against the loveliest scenery in the world, so swift and sure her course along her noblest river, dashing the rainbowed spray from her bow, so benignant her existence, that these fifty years past people have never tired admiring her, 'many an eye has danced to see' her flag in the breeze; many a heart has throbbed at her passing. and from first to last men have called her, perfectly comprehending her designer's inspiration, The Queen of the Hudson. So from the beginning of the race have superb women moved men to glorious works; and never has such admiration been more justified than when translated into utilitarian achievements. The Mary Powell is going to the scrap heap! That is what it really amounts to, though her owners are trying to break it gently to the many thousands who love her and cherish memories of those with whom they spent hours on their runs. 'She will make occasion trips.' This, any discerning person can see, is but softening the blow. Soon she will pass away along with such gray heads as began their wedding trips on the sympathetic decks. But that is the appointed course for beautiful women and devoted men, and wonderfashioned vessels, as well as for all and everything else in the cosmos."

COLONEL GORGAS TO SOUTH AFRICA.

Dr. Gorgas, who has transformed the Isthmus of Panama from one of the most pestilent regions in the world, to one of the most salubrious, now vying with Palm Beach as a health resort, is on his way to The Rand with the consent and approval of our War Department. The management of the Rand gold mines have asked him to deal with the diseases, especially pneumonia and grippe, that are gravely affecting their employees. Pneumonia has during the last few years caused great mortality among these men, epidemics quickly succeeding one another. Dr. Gorgas expects to find out the causes of the epidemics and then to lay plans for stamping them out.

Probably many of these cases of pneumonia are preceded by grippe, one of the most contagious of known diseases, in itself not serious, seldom fatal, but having oftentimes grave sequelae. The mine workers whose sufferings Gorgas hopes to—and certainly will—relieve are negroes, native Kaffirs, a race very susceptible to grippe and pneumonia.

In Panama Gorgas had, in the beginning of his work, a very similar problem to deal with. Deaths from pneumonia ran up to 15 in the thousand of population annually. Here again the initial disease was influenza, pneumonia being the sequel. The negroes

who were employed as laborers were fetched by thousands from Jamaica and other West India Islands, and had theretofore never known grippe nor been exposed to it; in the natural history of infection they were thus extraordinarily subject to its contagion —they had a low relative immunity to it. On the Isthmus they met sufferers from the United States or elsewhere, and thus epidemics quickly took place. Besides, ninety per cent. were then quartered in barracks (now but ten per cent are thus housed); thus grippe spread rapidly. Later the negroes took up quarters outside barracks, had their families come from their native islands, and thus provided a fresh stock of non-immunes to invite further mischief. The Canal Zone folk have, however, since become more or less, by acquired immunity, influenza-proof, and suffer now not much worse than in any American community.

Possibly the state of affairs in the Witwatersrand, which Gorgas will visit, is akin to that which formerly existed in Panama. If the labor supply has been maintained by recruiting fresh batches of Kaffirs from various tribes that have not been previously exposed to grippe, the disease would spring rapidly among them, with pneumonia as a sequel in many cases. The remedy would lie in avoiding in the future, as far as possible, such practices. Gorgas will make a general sanitary survey of the mine dis-It is an elevated region, probably not malarious to any degree. Presumably there is more or less typhoid, as anywhere else in the world. Our great sanitarian will certainly get established a regular organization such as has been accomplished so much in the Canal Zone.

The Kaffirs, it seems, live in compounds -quadrangles of buildings, resembling somewhat city blocks and surrounded each by a courtyard, such as in tropical America would be called a "patio." The buildings on the four sides of the courtyards are barracks, used for sleeping and other living purposes; the cooking is done outdoors on the ground, beneath slanting shed-like roofs, that project from the walls of the buildings on their inward sides. Here then, are conditions practically akin to those which formerly obtained in our Canal Zone, and very inviting to grippe and pneumonia epidemics; if at frequent intervals fresh supplies of immunes are introduced from various tribes, a situation is created accounting fully for the pneumonia death rate which has occasioned such consternation in the Witwatersrand

Influenza is now no more troublesome in Panama than anywhere else, as has been stated; nor has there been yellow fever in that region since 1906; there is some malaria left, but not much. Grippe could be abolished entirely in the Canal Zone, as elsewhere if people could only be convinced that it is worth while to take the necessary trouble; simply by isolating the grippe sufferers, as is done with smallpox cases and as ought to be done with measles cases. With the possible exception of dengue there is no disease in the tropics which attacks so many people as grippe; Gorgas will assuredly reduce the latter's incidence and, if he is properly "backed up," banish it from the Rand, with its so often fatal sequel, pneumonia.

BATHING AND HEALTH.

In our present and several succeeding issues appears and will appear, by official arrangement, the transactions of the recent meetings of the Association for the promotion of Hygiene and Public Baths. It is wholly fitting that the authoritative deliberations of the workers in these important fields, of hygiene and balneology, should be co-ordinated in The Gazette, which has through three decades occupied them. Indeed, Dr. Simon Baruch, the Association's President and a laborer for many years in behalf of hydrotherapy, gave to The

GAZETTE the first paper on A Public Bath, with plans, published in this country.

We are confident our readers will find the Association's proceedings interesting and most profitable. They will certainly be to all not suffering from an incurable aquaphobia; even that individual may see a light who, in overweening pride, boasted he bathed regularly, every Fourth of July, "whether he needed it or not." May these transactions serve to hasten the day when the public bath will be as essential to American civilization as it was to that of Rome or of Greece.

ORIGINAL ARTICLES.

THE PROCEEDINGS OF THE SECOND ANNUAL MEETING OF AMERI-CAN ASSOCIATION FOR PROMOTING HYGIENE AND PUBLIC BATHS IN BALTIMORE, MD.

THE ADDRESS OF DR. WILLIAM H. WELCH.

Dr Welch: Mr. Chairman, Ladies and Gentlemen-The Association for Promoting Hygiene and Public Baths doubtless was formally welcomed to the city of Baltimore by the officials to-day. I would simply like to express in behalf of the Johns Hopkins University, and I think I may add of the medical profession, our gratification that they have chosen Baltimore for their place of meeting. Dr. Baruch in his very interesting and instructive and suggestive address dwelt somewhat upon the fact that gifts had come to Baltimore; he spoke pleasantly about some of the workers here. I do think that perhaps we do sometimes have ideas and occasionally initiative movements in this city. Our sad lack, Dr. Baruch, consists in the lack of funds to carry out the good ideas which we think we have, and if you can divert any funds in this direction, I can assure you that the returns will probably be as good as anywhere.

You have commented upon the lack of support of the public bath movement on the whole in this country. It is true that it is lamentable how little appreciation there is of public sanitation; how utterly inadequate are the funds at the disposal of the municipality and state health officials for that work. At the same time, there is no reason, I think, for despondency. we compare the progress which has been made, particularly in quite recent years, in this regard, there has undoubtedly been a very considerable awakening of the people to the importance of efforts to improve the health of the people and to prevent disease. I also think it is pertinent, perhaps, to inquire whether even these inadequate

funds at our disposal are used most efficiently, most economically. I venture to say there is need for improvement in that regard—in the better use of the funds, small as they may seem to be, better use of the funds which are now at our disposal. We of the State Board of Health are particularly anxious to secure from our next legislature funds enough to inaugurate a better system for securing well-trained, competent local health officers in sanitary districts throughout the state, which may or may not coincide with county lines; local health officers sufficiently paid to give their whole time to the work. I think there is no need more urgent than that of getting trained men who will give their whole time to the work and will spend the funds which are available so as to secure the best results. There is great waste, surely there is great waste of public funds, not only in this, of course, but in a great many other directions. It is incumbent upon us to inquire whether we do use the funds we have to secure the best results.

Dr. Baruch said, and the name of this association confirms what he said, that the purposes of this association are broad, including both hygiene and public baths. I judge, however, from the membership and from the program that the larger emphasis for the present is placed upon that of the public baths and that the whole broad field of hygiene is brought into relation with the subject of public baths. The few words that I have to say will relate particularly to this question of the public baths. I cannot claim any great familiarity with the subject, but I do know that it is one of the important chapters in public hygiene; I do

know that public baths constitute an agency of first rate importance in the improvement of the health and well-being of the people and also in increasing resistance to dis-They constitute, therefore, one of ease. the agencies which link pure water, pure milk, clean streets, good, pure food and all those things which have manifest relation to the physical, moral, and social condition of the people together. The argument would be strong if they did not relate to the health of the people, I mean from the mere side of cleanliness, for ethical reasons and for pleasure. The same might be said of the water supply and of the sanitary disposal of sewage. There is a reason why a city should supply those aside from health, but when you learn that they do add to the health of the people, there is added argument for pressing home to the people the need of public baths. Fulton intends to say something about the development of the subject in this city. My remembrance is a little hazy, but I do recall at the time we had the American Public Health Association Mr. Beadenkoff, Dr. Gichner and Dr. Sherwood were at that time interested in the subject, but I shall not encroach upon the theme which Dr. Fulton will touch upon, but I would like to emphasize a fact relating to public baths. They undoubtedly increase resistance to disease. When we consider the agencies which we employ to reduce the mortality from preventable disease, we will note that some of them are the association for the prevention of tuberculosis, the city and state board of health, the district nurses, The public baths operate more indirectly, but perhaps with equal efficiency by increasing our resistance to disease. It is very difficult to say, when we consider the results of modern sanitation, just how much of the good accomplished belongs to efforts which are directed immediately against the causes of the disease on the one hand, and the efforts which are put forth indirectly -such as the public park, better housing, scientific ventilation of work shops, and here I would include, public bath agencies

-on the other hand. I do not think we can say exactly, but there is no doubt that our knowledge to-day tends to emphasize more and more the need of increasing the resistance to disease. An illustration would make that sufficiently clear to you. There is a great deal of tuberculosis. become infected with tuberculosis early in life, practically, so that at the age of fourteen nearly 100 per cent. exhibit tuberculosis and give positive reaction. We have the bacillus within us. Now as long as that period—ten to fifteen years of age lasts there is very little active tuberculosis. Why is it that at the age of 18, 19 and 20 when young people begin to assume the heavy responsibilities of life, when young men begin their professional studies, when they enter upon the work of life, you may say, that we have this sudden increase in Is it that there is renewed tuberculosis? infection? We have not the facts for positive statements on this point. That is where we need new light. There is no reason to assume reinfection; all that is necessary is that the system be weakened, with the consequent loss of resistance to disease, and the micro-organism already present in the body will develop. Now I speak of that to illustrate what I mean when I say that the public bath as well as other agencies is a very important agency in the campaign for the prevention of infectious diseases. It is very important for the protection of the health of the people. Add to this if you like the arguments of cleanliness, pleasure, increase of selfrespect, all those results which Dr. Baruch has so charmingly and graphically depicted in his remarks. We can go to the proper authorities and say, "Here is something to be done, which is for the health of the people." It belongs in this group. The health and efficiency of the people really are in a very direct and important way influenced by such agencies as the public bath. It is therefore a direction of modern movement in behalf of health, a practise of living which I consider to be of primary importance.

DR. JOHN R. S. FULTON'S ADDRESS.

Dr. Fulton: Chairman, Ladies and Gentlemen—As Dr. Welch has already intimated, I have written on the back of my program about a dozen names of persons who have become known to me in connection with the Public Bath Commission. I think an opportunity like this-a public bath meeting—does give us an opportunity to recall the names of those who have been serviceable in the Public Bath Commission. My remarks will not be historical, they will not have the proper chronological order, they will simply show the side line along which I found my way into this question. When I first came to Baltimore, the only person that I knew in this town at that time was Dr. Morton Shafer. Not many of you know Dr. Shafer; he was a man of very high type indeed. He was a very ardent advocate of public baths and was an editor of the Maryland Medical Journal. I always like to recall Dr. Shafer as one who first interested me in this subiect, who himself did not live long enough to make very much impression. The history of public baths did not at all begin with Dr. Shafer; he was recently back from Germany and was several years behind the Public Bath Commission. We had in Maryland in 1900 a Maryland Public Health Association; it had one successful and good meeting, and I remember that Dr. Mary Sherwood was an active member of the association, and she proposed to me that we should take up the question of public baths and gave me the first information that I had concerning the Public Bath Commission in Baltimore. It was not making a great row then. We gave invitations to the Public Bath Commission to tell us something about their work at the meeting of the Maryland Public Health Association, and there I met the real patron saint of the public bath propaganda, the Rev. Mr. Beadenkoff. He appeared at the old Faculty Hall round on Hamilton Terrace and brought with him Mr. Norris and Mr. Levering, both of whom are in-

struments in a good deal of beneficent mischief in Baltimore. Mr. Beadenkoff had been pastor of a church near the water side and he had to rescue many boys who were having baths off the public docks and re-uniting the boys with their clothes, appropriated regularly by the police. rescue work was regularly carried on by Mr. Beadenkoff for quite a time; it seems that Mr. Beadenkoff had secured funds by means of which he was able to establish a single bathing shanty or shack for boys in his part of the city. It was in consequence of this work and with the assistance of Mr. Morris and Mr. Levering that with great difficulty he succeeded in getting as much as \$500 out of the City Council, and that the Public Bath Commission became a part of the city government. I did not know until that meeting of the American Public Health Association that there was such a set of people in the town. story they told was very interesting, and in consequence the Maryland Public Health Association evolved the plan that at its next annual meeting a special meeting would be held in this hall—Johns Hopkins University was always very good to us in providing a place for public meetings-and bring this matter more to the attention of the people of Baltimore. It happened while we were discussing that matter that we found two persons who were very much interested in the subject and intended to study it during the summer, and they were Dr. Henry Riach and Dr. Louis Riach. They were intensely interested in the subject of public baths. That was the year in which Dr. George H. Ray was president of the Faculty. In the loss of Dr. Ray everyone knows we lost an exceedingly important hygienist. In the following autumn we had our meeting in McCoy Hall, and we had invited down Josiah Quincy of Mr. Quincy gave us a most interesting talk and lantern demonstration on the important public bath arrangements which they had in the city of Boston. His speech was followed by one by Mr. Levering, who without the slightest embarrassment showed the whole equipment for public baths in Baltimore at that time.

The next move, I think, was instigated by Dr. Gichner, who thought that funds to some amount might be subscribed in a popular way to enlarge the work which the municipal Public Bath Commission was then doing. I think he succeeded in raising a small amount of money, but the important thing which was done in consequence of Dr. Gichner's activity was some newspaper publicity. That had a very important effect because it reached well outside the audience we had in McCoy Hall. In consequence of this newspaper story, Mr. Henry Walters sent for Mr. Norris and expressed a great deal of interest in this attempt to raise private funds for the erection of public baths. I do not know the intimate history of that time, because when I became intimately acquainted with the history, Mr. Walters had given sufficient funds to erect the first public bath that bears his name. He has since then repeated his gift four times. I am simply telling you the history of the Baltimore public baths as I know it, because I went away from Baltimore and could not keep in touch with all the developments.

I think the next thing was the date when the Public Bath Commission sent Mr.

Beadenkoff to talk with Major Venable. Major Venable was the president of the Park Board and he had great ambitions for the development of the park system of Baltimore. We had no reason to think that Major Venable would become enthusiastic on any proposition the Public Bath Commission had to make but sent Mr. Beadenkoff on an uncertainty, and the result of that first visit to Major Venable was the big pool at Patterson Park. I am told it is one of the best in the United States. That was a very important period in the history of the public bath movement for the reason that it joined up the public bath movement with other associations in Baltimore—the Playground Association. the Public Athletic League and such other agencies.

This is as far as I am able to trace the history of the movement for public baths in Baltimore. The name of the next person, I should have one more name on the back of my program, I do not know. It is the name of the city councilman who got the first appropriation made by the city of Baltimore for the establishment of an indoor public bath. So that brings us down to what must be the ultimate status of the public bath movement. The public bath must be created and supplied by the municipality for the benefit of the youth and public bathers in general in the city.

OPENING SESSION MAY 13TH, 1913, AT THE CITY HALL.

Meeting was called to order by the President, Dr. Simon Baruch. Dr. Willian H. Hale acting recording secretary.

Mayor James H. Preston delivered an address of cordial welcome in behalf of the municipality and people of Baltimore, and indorsed the national program by his official approbation of the work of the committee of arrangements.

The President replied with complimentary allusion to the Portable Bath which was discovered in Baltimore, forming an epoch in public bathing, because it enabled the smallest town to convey the bath to the toilers. Dr. Baruch expressed high appreciation of the hospitality extended.

Mr. Arthur M. Crane of New York presented a paper on "Safeguarding and Care of Indoor Swimming Pools."

(This paper appeared in the December issue of The Gazette.)

Discussion of Mr. Crane's paper—The President: This paper opens a new era in pool bathing because it shows that the chief objections, waste and contamination of water which are very serious may be absolutely obviated by the treatment which Mr. Crane has so ably presented.

Dr. Hale: The best authorities do not expect of mechanical filtration a higher efficiency than 97 per cent., which has become the standard specification for city filtration plants. To be absolutely certain of purity hypochloride of lime should also be used.

Mr. Beadenkoff asked which is the bet-

ter material, non-absorbent tile, cement also about a sand floor. Mr. Crane answered that any which would harbor germs is objectionable. The surface of the pools should be glazed without cracks or roughness, and square corners eliminated. A sand floor is objectionable, because it may act as a filter.

REPORTS ON MUNICIPAL BATHS BY DELEGATES.

BROOKLYN—Dr. Hale, Supt. of Public Baths: The past year, like every other since the first interior public bath was opened in Brooklyn in 1903, has been one of progress.

Public interest has no doubt been stimulated somewhat by the formation of this association, and the International Conference on Public Baths at The Hague last August; but the rapid growth of our boro and the increasing popularity of these baths are ever present underlying causes of this interest.

A criterion of this demand is given by the sales of soap and towels which have increased every year, amounting in 1912 to \$21,655.10 for our seven interior baths. In addition to this, the Coney Island Bath which had its first full season last year took in \$25,309.30 for rent of rooms and lockers at 10 cents each.

The increased receipts of the seven interior baths for the first four months of this year are very significant, amounting to \$6,121.67 against \$4,855.99 for the same period of 1912. The Coney Island Bath is not yet opened for this season.

The only public swimming pool in Brooklyn is now utilized for instruction in swimming of the female teachers and high school girls of the boro, under direction of the department of education, which system has been inaugurated within the last few months, but no such provision has yet been made for men and boys.

The management of the Coney Island Bath involves the important problem of devising some workable scheme for limiting the time of bathers, as we found last year that many persons, especially women, come early and remain all day; thus excluding others. This has led to a proposition to build another bath alongside. We hope, however, to utilize present facilities so that the bath may accommodate more than double the number that have ever used it on the busiest day.

How great is the pressure for these seashore baths may be inferred from a statement which appeared in the local papers within the past week, that the estate of the owner of a private bath adjoining the municipal bath and encroaching on the domain of the city, was valued at about \$750,000.

Let us hope that aroused public interest following the present meeting, will bring about results in this direction, and in a great expansion of our bath system, for which the time is ripe.

Boston-Mr. Hugh McGrath, one of the pioneers of indoor baths: Since last year we have opened an additional bath and in connection with one of our gymnasiums we have a floating bath which is close to beach bath. The South Station, where those who are compelled to work in hot, stuffy rooms during the hot days of the summer will have an opportunity to take a dip in the cool water of Boston Bay. We have opened up another in Charlestown, which has been one of the most neglected parts of the city. We have opened up a house which cost \$40,000 to equip, and while it is very inadequate, it will serve as a beginning for better things. There is before the City Council an ordinance calling for an expenditure of \$350,000 to install other bath houses. We want more and we are going to get them, eventually, in every part of the city.

In several of the playgrounds, through some lack of foresight, shower baths have not been secured, but before the playground season opens this year, they will be equipped with shower baths.

PHILADELPHIA—By W. L. Ross: We built and opened a new bath in the latter part of November. Our bath houses are not as elaborate or as expensive as the municipal baths. This was erected at a cost of \$35,000. It has altogether seven bathrooms. I have had this work for fifteen years.

RICHMOND, VA.—Mr. Cassidy: About five years ago Mr. John T. Branch, a wealthy citizen of Richmond, offered to give the city a public bath at a cost of \$20,000, provided he might have the permission to name the first commission, which was to be a self perpetuating body, and that the city should support the bath. The bath was built and has been in operation for four years. The first year we had 42,000 bathers, the second 50,000, the third 54,000, and the last year 60,000. We charge five cents for adults and three cents for children. We have no city bathing. There has been no demand for city bathing, and therefore we haven't it.

The success of the first bath in the eastern part of the town was so great that Mr. France proposed to give the city another public bath upon the same conditions that he gave the first. The city accepted his offer and he has lately completed a second bath at a cost of between \$35,000 and \$40,000. That bath will be in operation in about thirty days. We have in our first bath a public laundry. It is in a section of the town where we thought a public laundry would be a great success, but it has been a great failure. We cannot get the women to come there and wash their clothes. We have advertised and sent out circulars and the only explanation is that they have too much pride. For that reason, we have abandoned the public laundry in the bath in the western part of the city. Both baths have about the same number of baths, about seventeen showers for men and five for women.

Our report for 1912 is 55,345 men, 1,326 boys, 2,681 women, and 946 girls. Our receipts from the city of Richmond were \$2,500—our appropriation is \$3,000; the receipts from bathers were \$3,081. Our expenses were, all salaries \$3,760., water \$234.21, fuel and light \$826.60, supplies \$986.35.

We are here seeking information. For instance, how can we fill our baths other than on Saturdays, when we bathe one every minute? We only give the men twenty minutes, and if they stay over time we require them to buy two tickets. On Saturday we bathe, on an average, between 700 and 800—more than the total number of baths on the other five days.

Our bath house is magnificent. We endeavor by personal inspection to maintain

rigid cleanliness of the bath, having no superintendent. It is very popular for we have judges, doctors, lawyers, physicians, and all classes of people, because it is so much better than they can get at home. A movable valve gives every temperature of water, from cold to 105 degrees F. much better than at home.

Mrs. Jacobson:—It would be a good idea to have five bargain days—say three cents on week days and five cents on Saturday. I believe that would regulate the question of a large percentage on that day.

Dr. Baruch:—Judges and doctors have plenty time to bathe on other days and would doubtless gladly do so.

Mr. Eisenbrandt:—I am much interested in the cause of failure of the laundry; this is so contrary to the experience of Baltimore. Isn't it possibly due to the location of your bath house or laundry?

Mr. Cassidy:—We are located in a manufacturing section surrounded by a great many of what we call down there Russian Jews and we have a great many girls who work in the factories. Some of them come there in the evening after the factory is closed and do their laundry. We charge five cents an hour for the use of tubs and hot and cold water and a place to dry their clothes, but we find a pride that we have to break down and cannot. They will come there and instead of coming to the front door they will come to the back door. It is what you might term a foolish pride.

Question:—Do the colored people use the laundry as well as the white?

Mr. Cassidy:—We don't have negroes. If we allowed the negroes, we would have no white people. It was given for the benefit of the white class who are at liberty to come at any time.

Dr. Sherwood:—In Baltimore we have added to the patronage in our laundries when we arranged an entrance door for the laundries that should be at the side of the house, and we found that more women were inclined to come to the laundries when they did not have to come to the front of the house.

We are allowing the men to use the laundries. We really have had to take away the laundry in Public Bath No. 1 from the women, with the exception of two days in the week because so many men have come to use the laundry that it has finally been given over to them for those

days, and they come by the hundreds to use it.

Mr. Eisenbrandt:-Your statement was to the effect that the character of the patrons at the laundry was Russian Jew. That is all the more remarkable to us, because our greatest patrons are Russian Jews. Our No. 1 bath house has a very finely equipped laundry and it is almost exclusively patronized by Russian Jews. You said your bath house with the laundry was located in the factory district. Does that mean a district in which the factory operatives are located or are their homes some distance from the laundry? I am interested in the statement that you take it as a matter of pride on the part of your people because they look upon it as a sort of charity affair. That same objection was raised to our laundry and bath house, but it has all been overcome and we find there is no objection on that ground or to using the laundries, if they are within access of the people for whom we have established them.

Mr. Hartwig:—In regard to the factory district it is in what we call the valley of Richmond is comprised of seven hills and this is between the hills, where a great many people live. There are four carlines that transfer just at our bath house. People from different sections of the city come down and get their transfers at that point and they have time to take a bath, use their transfers and go home. For that reason we are well located. At one time in my recollection this section of town was one of the best parts of Richmond, but now the people have moved away and this class of people are moving in and taking their places.

Dr. Hale: Don't the Russian Jews bathe

on Friday?

Mr. Hartwig: They do—Friday for the

Jews and Saturday for the Gentiles.

NEW YORK—By Horace C. Todd: On the Baths of Manhattan the following facts show the marked advancement in public bathing during the past year in the second largest city in the world.

Much has been said and written during the past decade concerning the origin and history of the movement for promoting hygiene, and while it is an interesting thing to know that the great principle of specific gravity was discovered when Archimedes jumped into a bath tub filled to the brim with water, found that the volume of water that overflowed was equivalent to the volume of his body, and ran down the street shouting: "Eureka" . . . yet, it is not these fascinating events of ancient history that are the vital things of this day of actual conditions.

In New York the congestion of great masses of poor requires definite attention along hygienic and sanitary lines.

During the year 1912 there were operated by the Borough of Manhattan, 12 Interior and 6 Floating Free Municipal Baths. While their capacity was not taxed to the limit except at certain periods of the year, yet 6,375,133 fre baths were given. This is an increase of nearly 1,000,000 over the patronage of 1911 of 5,400, 567 baths. It is quite probable that this patronage was higher than that of any other city in the world during that year. Of these baths, 4,760,683 were taken in permanent interior buildings and 1,614,450 in floating baths. The ratio of men to women was about 4 to 2½. During the month of July alone 100,-264 baths were given at Rivington Street, and on July 10th, 4,689 bathers took advantage of the showers at that building. During the month of July the average daily attendance was 3,234, or an average of 202 bathers per hour.

These figures show that the baths of the lower east side of New York claim to bathe a larger number of people than any other bath.

The Floating Baths were opened during the latter part of June, and remained open until the cold weather in October. In spite of the fact that the Health Department failed to approve the sites of six of our 1911 Floating Baths, the patronage for the remaining six during 1912 was nearly equal to that during 1911. Fortunately, the approved locations of the Floating Baths were those in the lower water fronts of the east side.

The average cost per bather during 1911 was a little over 4 cents, while in 1912 it was a little over 3 cents.

One of the most difficult problems which has confronted the City is that of persuading the people to patronize the baths. It has been found that while at certain periods of the year the baths are taxed almost to their capacity at other times the patronage falls very low, and this is undoubtedly due, first, to the ignorance of the people, and second, because there is no definite attraction held out to them.

In an effort to bring to the attention of the public at large the great opportunities for cleanliness offered by the City's bathing institutions, it was found necessary to commence a campaign of popularization. This was done in part by the distribution of many small pamphlets giving in brief detail the locations, rules and general data concerning baths. Arrangements made with many of the societies and swimming clubs of the City whereby meets were held in various buildings; four large finely equipped gymnasiums located in the bath buildings were thrown open to the public, literature and photographs were sent to the various Child Welfare Exhibits, and every possible effort made to make the appearance of the buildings attractive and inviting.

Realizing that some attraction should be held out to the public at large in order to make them appreciate the necessity of regular bathing, plans and specifications for four large swimming pools have been drawn and work has already been begun on two of these—one at the Rivington Street Bath and the other at the Rutgers Place Bath. It is planned to open the Rutgers Place Swimming Pool to the public this fall. This pool, which is 54 feet long, 24 feet wide, and varies in depth from 21/2 to 61/2 feet, will hold approximately 44,000 gallons of water. Located as it is in the centre of a thickly populated district, it will serve as a means of getting many thousands of people interested in the bath itself, and in this way spread the gospel of cleanliness.

At Rivington Street the pool is in progress of installation and will be open this fall. It will be 60 feet long, 30 feet wide and the depth will vary from 4 to 8 feet. This pool will hold 80,000 gallons of water when filled and will be the second largest of the municipal tanks. Like the Rutgers Place pool, it is located in the midst of a tenement district.

With the opening of these four pools, it is hoped that the spirit of recreation which seems to appeal to the masses more than that of cleanliness will produce the latter.

For \$56,000, a new site was purchased on West 28th Street near 9th Avenue, for the building of a new modern bath. This building, which will probably cost \$240,000, will contain 158 shower rooms, a pool 60 feet long, 24 feet wide, with a depth varying

from 3½ to 7½ feet, a gymnasium, roof garden and laundry. The plans which have already been submitted and accepted show that it will probably be the most complete structure of its kind in the City. The pool will hold 60,000 gallons of water.

Our friendly critic, The Association for Improving the Condition of the Poor, has written in its recent pamphlet on Public Baths: "That the present administration has probably accomplished more, and certainly as much as any previous administration in this City."

During the past year we have spent, in an effort to bring the baths to the highest possible standard, over \$280,000. it is true that there is a need for more baths in certain portions of the City, it has been found more advisable to put in proper and attractive condition the buildings which it at present has. Three years ago most of the bath houses were in a rather dilapidated condition and badly in need of repair. Shower doors were suspended by one hinge, marble seats and slabs were broken, the condensation of vapor on side walls had made them loose and dangerous, the buildings were greatly in need of paint, and there was everywhere an appearance of neglect. It has been with great effort and resultant expenditures that these defects have been remedied, and a point has been reached in the progress where the building of new baths is now a necessary step.

With the building of the new 28th Street Bath, the installation of the swimming pools and possible construction of other new baths, the prospect for 1913 and 1914 is very encouraging.

The Health Department has condemned most of our floating bath sites, and it is very likely that during the next few years it will be necessary to discontinue operation of the river baths. This will turn large crowds of summer bathers into the interior buildings, and the demand for increased accommodations will necessitate new institutions. It is also hoped that the distribution of thousands of our pamphlets during the next year and a continuance of our policy of popularization will so attract the population to the present buildings as to make new ones an absolute necessity. Many new changes in the method of operation of the baths are now being considered and will shortly be put in force. It is likely that in the course of the year new signs will be placed in front of the buildings; an experiment will be tried with regard to furnishing soap and towels to the patrons, as well as the construction of an experimental laundry.

In conclusion, let me add a word of appreciation to those whose valuable suggestions have helped us to make the past few years rather distinctive ones in the record of municipal bathing. Many of these associations have submitted recommendations to us, and in several cases we have put their recommendations in active operation. By a more direct affiliation with such associations as this and a closer co-operation with the officials of other cities through meetings of this nature, we are bound to receive suggestions and help that will be invaluable in the operation of our individual institutions.

Question: What about the experiment in that 28th Street bath?

Mr. Todd: It is going to be a laundry for men to go in and wash their clothes.

Mr. Windolph: You spoke of making the baths more noticeable from the outside.

Mr. Todd: Our idea is to put an electric sign out that will show in black letters in the daytime and electric letters at night.

Mr. Windolph: I am responsible as one of the architects. The city went to a great deal of expense on the illumination for the interior and the exterior should attract at-

tention at night.

To a question of Mr. Crane regarding the contamination of River Baths in New York, Dr. Hale replied: "We have never been able to trace any source of infection to these baths. We should provide the best water we can get. It is well known that in New York the hospitals take care to destroy the bacillus of typhoid fever, not allowing any to go into the water. And that is the most dangerous bacillus to be swal-This matter of taking a floating bath and making a tank in it looks pretty good; if you can work it out, and I hope you can. Dr. Soper put that question to Mayor Gaynor who referred it to me. If you must have salt water and have it purified, why not get it on shore where it won't be subject to so many adverse contingencies?"

TOLEDO—Mr. Ashley: Mr. Chairman, I represent a city that was awakened a few years ago by a man whom we called "Golden Rule" Jones. His worthy succes-

sor, Mr. Whitelock, has, within the last year, installed four open baths in the city, four plunge baths-open air-that have been located in the public parks and in the poorer districts of the city. My impression is that the purpose or the cause of the construction of these baths was primarily one of safety. Toledo is located on a peninsula and has bathing water on three sides and the mortality from drowning in these streams has been something frightful. You can imagine the welcome to our present mayor when he constructed last year four safe bathing places for the poor children. He has asked me to come here to-day, however, to ascertain what is being done by other cities in the way of providing facilities for these helpless people. I am glad to be able to take him a fund of information that I never anticipated having.

Trenton, N. J.—Mr. Mueller: No bath

in this city.

BALTIMORE—Dr. Gichner: We have made progress both in the number of baths and in the facilities for bathing. Just now we have the contract given out for an additional swimming pool at Gwynn's Falls Park. We opened, last year, the bath at Greenmount Avenue, and there is quite a bit of work going on in the stimulating for bathing facilities in various places with the portable baths. We are attracting more attention and with that attraction we get the result of the building of a new bath wherever it is needed. The number of bathers has increased largely. We will show you at the various houses what we are doing to stimulate the number of bathers, how we stimulate the number of laundry users, and how we do in stimulating public opinion for the demand for baths. We send free tickets around to the various schools and districts and we give free baths in the morning. That is one way Richmond can get more bathers give free tickets to the boys.

Mr. Cassidy: In Richmond every public school has a right to send their boys and

bathe them free.

Dr. Gichner: We stimulate in that way a large number of bathers among the young-sters. We raise them up to the bathing pleasure.

Visitors may obtain one of the Baltimore books on the desk and also the annual report of this year, where you can see the progress made from the installation of these baths until now.

One part of our work is the outdoor

swimming pool where we give lessons in swimming. We employ a male and a female teacher. Our guards also, when they are not busy, teach the youngsters how to swim. Part of our entertainment is num-

erous aquatic sports participated in by the youngsters taught at our swimming shores. We try to co-operate in every respect with the Public Athletic League and Public Playground Association.

TUESDAY EVENING, MAY 13TH.

MEETING PRESIDED OVER BY MR. LEVERING.

Mr. Levering—We published the Governor's name as one of our speakers, but he is not here, having telegraphed and written me that he is unable to be present. We have, however, other speakers, and I am sure we will have an evening of interest and profit. Our first speaker is Dr. Baruch. Most of you know Dr. Baruch's interest along these lines, how he is called the father of this movement and how he has done such a large work educationally in New York and throughout the country, and so it is particularly appropriate that he is to talk to us on this subject. He is the president for this annual Congress for the Promotion of Hygiene and Public Baths. We are glad to welcome Dr. Baruch.

(Dr. Baruch's Address appeared in the December issue.)

Mr. Levering: We are indebted to Dr. Baruch for his stimulating address. has certainly chosen a very good field in emphasizing school baths. Some of Public Bath Commission of Baltimore are here and they can testify that we have at times made a vigorous effort to have baths placed in the schools, but we have not made much progress. It may be that our commission needed a little of the stimulus which Dr. Baruch has brought to us. I thank him for it. I do not know whether we are ready to say to the City Council, "give us school baths, and we will give up swimming pools," and yet that is what the Doctor seems to advocate as being the greatest good to the greatest number, not only cleansing, but educating all our children. I hope, sir, your earnest advocacy will not be lost upon our own city...

The next speaker is known to us all. Ready and willing to lend a hand to every good work in our city. His name is a synonym for good citizenship. He is always intensely interested in all matters of health in the community, Dr. William H. Welch.

It is always a pleasure at any time to welcome Dr. Welch to the platform.

(See page 7.)

Mr. Levering: In behalf of the audience Dr. Welch, I thank you for your interesting remarks. We have one with us tonight who tried to get away from Maryland but like a good lawyer soon came back again—Dr. Fulton, secretary of the State Board of Health, one of the earliest workers in the Public Bath Commission, will now tell us something that he has in his mind about this good work.

(See page 9.)

Mr. Levering: I would like to add a word or two. There are two other features to our work growing out of it. With our interest in the public bath question, naturally the sanitary aspect of such matters came under our observation, calling our attention to the fact that in Baltimore there was no response to the recognized need of public comfort stations. We had an exceedingly interesting history in our first attempts to inaugurate such an institution in Baltimore, but finally we secured a site on the old Market Space, demonstrating that the question of the selection of a site was a very considerable one. Growing out of that we have in the newer baths had similar facilities installed. The most recent movement in that direction has been the action of the City Council in advising the site for a comfort station on Louisiana avenue. which is the northern side of Lexington Market, and in a very short time we hope that will be in operation. It has been a longfelt want in that immediate neighborhood. That work is progressing. It takes time to educate people to any condition they have never been used to. It takes time, but as in the case of our baths, the more we have, the more demand we have in other parts of the city.

The other interesting feature is the outcome of the generous suggestion of Mr. Beadenkoff to this work. When our funds gave out (and he thinks he could distribute about twice as much money as we have) he tried to think what he could do and so he evolved what is known as the portable baths. For the small sum of four or five hundred dollars a little portable house is built and put at the intersection of certain streets, and it is allowed to remain there during the summer; then when the summer is over it is taken down and packed away until the next summer. It has been wonderfully successful, supplying localities where we did not have these baths. He has some pictures showing the children gathered around these places waiting for their turn. Mr. Beadenkoff will go down in history for having evolved the portable bath system. Our first efforts were rather

crude. We had to take such material as we had, but they served the purpose and each succeeding year as it comes along sees an additional bath, until I think now we have five of them. There is a great demand in each of these localities that these baths shall be moved.

We are much indebted to the members of the association for coming to Baltimore and stimulating our interest, and we trust you will carry away increased interest in the matter yourself. Hoping the session to-morrow will be profitable, I thank you for your presence.

Mr. Beadenkoff: Just a word about the portable bath. Its orgin was not in my It grew in a committee of which Mr. Eisenbrandt, Dr. Gichner, Dr. Sherwood and myself were members. I simply want to say that they should be given their

TUBERCULOUS ENTERITIS AS A COMPLICATION OF PULMONARY TUBERCULOSIS.

By Frank Neall Robinson, M.D., Monrovia, Cal. LATE ASSISTANT MEDICAL DIRECTOR POTTENGER SANATORIUM.

Tuberculous Enteritis is here considered as a complication, rather than a primary affection. Not that primary tuberculous infection of the intestines does not take place, for it has been proven at autopsy by a large number of observers; but as such it does not here concern us. Secondary intestinal tuberculosis is a very common complication of pulmonary tuberculosis. Eisenhardt¹ in one thousand post mortems on tuberculous subjects, found it to exist in 56.3 per cent. Heixheimer² found it in 57 cases in 58 autopsies.

PATHOLOGY.

That we may have a thorough knowledge, more particularly of these symptoms and their variation and more easily arrive at a correct diagnosis, a thorough and comprehensive insight of the pathology, particularly the gross or macroscopical aspect is essential. All the mucous surfaces are not especially susceptible; for instance, the mouth, throat and oesophagus is much less liable to infection than the larynx and trachea; while the stomach, duodenum and bile ducts are almost immune, as is also

For in tuberculosis we are the urethra. dealing with an organized ferment, and the character of secretion furnished by the stomach, duodenum and ductus, choledochus can readily explain the relative immunity furnished to these structures by their power of hindering the growth of the tubercle bacilli; and the oesophagus and urethra are favored, as the flow of food over the former and urine over the latter never lies dormant for any length of time. But how different in the small and large intestines, where sputum from the pulmonary involvement, having been swallowed, remains lying for a long time. And one is particularly struck with the predilection of certain intestinal areas to be the seat of at-The ulcerations are not distributed throughout the intestinal tract; but they are found where stasis of the current of material undergoing digestion, which carries the tubercle bacilli, takes place—in the ileum, caecum, rectum, sigmoid, ascending and transverse colon, and at the flextures, in the order named. And quite frequently there occurs, with the involvement of the caecum, concomitant tuberculous appendicitis. The ileum is the seat of most frequent infection in its lower half, involvement taking place in Peyer's patches and in the

¹ Ueber Haufigkeit u Vorkommen d Darmtubercu-se, Maug. Diss. Munchen, 1891. 2 Deutsch Med. Wochenschr, 1885, No. 52.

solitary follicles. These ulcers show many of the characteristics of typhoid ulcers, and lead in 5 per cent. of the cases to hemorrhage or perforation. They extend in the line of blood vessel supply and along the lymph channels, thence transverse to the long axis of the canal. To show the high percentage of ileum infection Fredricks³ found this portion of the intestinal tract involved in 80 per cent. of his cases.

These ulcers are irregular in shape, the margins are red, the edges and bases are infiltrated, and caseous areas are seen studding the floor and edges. The involvement extends through the submucosa and muscular coat to the serosa, and military tubercles or a tubercular lymphangitis are often shown over this layer; the serosa is thickened from the connective tissue infiltration, and reddened, and the whole is covered with layers of fibrine in different stages of formation, with adhesions to the mesentery or to loops of intestines. In this type, called the "ulcerative" or "circumscribed" one will find all gradations of changes from cicatricial tissue to ulceration-papules, then pustules, then ulceration, then cicatricial tissue and finally (in some cases) repair; but most frequently they heal only partially and show a ten-dency to extend in one direction while cicatrization occurs in another. (It is the repair that causes the constriction of the gut, with its concomitant symptoms.) In fact, here in the intestines the tuberculous infection bears a striking resemblance to the same infection in the skin; there is always a breaking down going on as repair takes

In infection of other portions of the intestinal tract, we have a second form, as well as the "ulcerative" type to deal with, known as the "hypertrophic" or "tuberculous granuloma." This usually attacks the caecum, the sigmoid and lower portion of the descending colon; and it is frequently diagnosed as a sarcoma or carcinoma on account of its tumor like feel, and of the cachexia which accompanies it. As it is usually found with a quiescent pulmonary lesion, nature here has thrown out a large amount of connective tissue, so that the surrounding tissue may be defended from the further encroachment. In this variety the greatest infection is believed to have taken place in the submucosa; and here in-

stead of ulceration with breaking down alone, there occurs an immense deposit of fibrous tissue, with tumor formation and with the characteristics of new formed connective tissue-contraction, followed stenosis. This contraction is most marked the ileo-caecal valve area, because greatest shrinkage takes place at this point, and the valve itself is usually involved in the process. This is frequently spoken of as the surgical type, and our knowledge of it is comparatively recent. Conrath4 and Durante (1890) were the first to call attention to the resemblance and the difference between carcinoma and tuberculous tumor of the caecum. Later (1891) Billroth, Salzer⁵, Pilliet and Henri Hartman all agreed with Conrath upon the tuberculous character of the tumor in question.

Tuberculosis, no matter where located, excepting in the meninges, is practically never fatal, unless secondary infection has taken place. And it is remarkable how great is the reparative capacity the intestines have when infected with tuberculosis, notwithstanding the constant opportunity for this secondary infection. Here as in any portion of the anatomy, the part played by this secondary infection is an important The resistance of the various serous tissues to the tuberculous infection differs, the greatest being found in the peritoneum, the least in the meninges; but the minimum of absolute repair is to be found in the intestinal mucosa. And when one stops to consider how nature provides other organs with resistance against the invasion, it is strange she has not gone a step further and given the same power to the intestines; for it is a well known fact that the mucosa of the bladder and the stomach will both repair themselves, but the intestines never without proper aid.

Remembering that this pathological picture is one of tuberculous infection only, we must take into consideration also that at the same time we find associated with it all grades of simple catarrhal inflammation, such as are due to pathological changes in function and mechanical irritation and to the consequences of dietetic errors. These catarrhal affections, associated as they are with follicular and glandular inflammation, with erosions and ulcerations, favor the infection with tubercle bacilli; and if they do not exist, tubercular

s von Langerbeck's Archiv. Bd. XLIII.



s Bertrage Zur Leher von der Tuberculose, Marburg, 1882.

⁴ Brun's Beitrage zur Klin Chirurge. Bd. XXVI, Heft. 1, 1898.

infection will not take place. For otherwise we would find enteritis to exist in all our cases of pulmonary tuberculosis; since there are few patients who do not at some time, no matter how careful they are, unconsciously swallow their expectoration. These factors can readily be understood if we consider the important fact that intestinal tuberculosis makes its appearance most frequently in the advanced stages of pulmonary tuberculosis; I do not remember a case in my experience where the disease occurred before the advent of expectoration.

CAUSES.

With this knowledge of the pathology of the disease, let us consider the factors leading up to this infection. Those who have done much work in gastro-intestinal diseases in the tuberculous, must have been struck with the high percentage of those suffering from gastroptosis, dilatation, atony of the stomach and hyper-acidity, with constipation alone, or alternate con-

stipation and diarrhoea.

If we exclude pastroptosis (which is, no doubt due to the loss of weight and the fatty structures naturally helping to support the stomach and kidney), we are struck by the fact that in the other affections we have those factors which prepare the way for the infection. In dilatation we have loss of motility as well as lack of secretion, both of which favor the infection; and as both gastroptosis and dilatation, in those cases affected with pulmonary tuberculosis, have an atony of the whole gastrointestinal tract, we find constipation a further factor; and still considering these secondary affections, with those factors I have already mentioned, we have a partial digestion only of the food taken, with its secondary changes of fermentation in the starches and sugars and putrefaction of the meats, eggs and milk consumed. And we have yet another factor to consider—the thirst of these patients, owing to the low grade inflammation of the whole of the gastro-intestinal tract and the temperature most of these cases are carrying. Such patients are great water drinkers, which propensity tends further to weaken the already lowered secretion, and to increase lack of motility by mechanical means. One will find few of these patients where "splashing" over the stomach cannot be elicited at almost any hour of the day. In 1908 Boardman Reed and I brought out the prevalence of these conditions as a primary factor in pulmonary tuberculosis and showed in that report that 88 per cent. of our cases suffered with the lower border of the stomach at, or below the umbilicus; and in twelve of those cases it rested on the pelvic organs.

All suffered with constipation primarily, 76 per cent. continued to suffer with constipation, 10 per cent. complained of constipation alternating with diarrhoea, 10 per cent. suffered with diarrhoea with tuberculous infection in the bowels, 2 per cent. with diarrhoea; but no tuberculous infection could be demonstrated in the intestines, and only one case showed regular bowel movements. This case had, however, shown marked improvement.

This report covers only a series of 133 cases seen in four and a half months, and includes only those examined because they complained of gastro-intestinal symptoms; no doubt a larger percentage would have been found who had derangement of these organs, but without sufficient symptoms to attract their attention, had we continued our investigation over a longer period and to all patients with pulmonary tuberculosis.

SYMPTOMS.

Having considered the pathology, with its varied character of gross changes, and its various location of involvement, it must be evident that the symptoms vary also, depending on the severity of the involve-ment and its location, as well as the character of the infection, (ulcerative or hyper-Therefore I will first consider trophic). the symptoms of purely "medical" cases; and then those of the so-called "surgical" variety. And here let me say that the conservative surgeon is to-day markedly careful of operating on tuberculous enteritis; and after an exploratory incision and the true diagnosis made is returning many of these cases to the phthisio-therapeutist for In involvement of the ileum treatment. and ileo-caecal region, we may have no well marked symptoms. But pain will usually be found to exist especially after a meal, when peristalsis is at its height; this pain is localized to the lower right quadrant of the abdomen, and if this portion be palpated, tenderness or pain can be elicited. The pain is more marked as cicatricial contraction takes place and the tenderness on palpation is increased, with muscle rigidity. We will also find gas distention of the bowel and splashing of liquid; diarrhoea

Southern California Practitioner, Nov., 1908.

may be present, but formed stools will be found to be the order. As contraction takes place we have formed stools quickly followed by a liquid evacution. When the ulcerative process becomes extensive we may have a typhoidal state—with dry tongue, constant thirst and wandering delirium with extreme emaciation.

It is in these cases that we see the tuberculous appendicitis. But here let me call your attention to this form, so that it will not be mistaken for an acute attack. The symptoms of an acute attack of appendicitis are pain, nausea, and vomiting, local sensitiveness, elevation of temperature and leucocytosis; and any deviation in the order in which these symptoms make their appearance, precludes the possibility of an acute infection. (We at times see almost this same type of appendicitis in typhoid In tuberculous appendicitis the symptoms are pain, and local sensitiveness; the nausea and vomiting are absent (or very slight indeed); elevation of temperature (above whatever course it has been running), is absent; a leucopaenia exists. Perforation usually takes place from the ulceration causing this form of appendicitis; but the general peritoneal cavity is not infected, as it opens in a cavity previously closed off by adhesions.

When the ulceration affects the ascending colon and caecum, diarrhoea is the rule, accompanied by pain followed by tenesmus; and as the ulceration becomes more severe, blood and mucus can be found on macroscopic examination with occasional hemorrhage. The number of stools vary from three to ten (sometimes more) in twenty-four hours, thin and watery mostly, but sometimes of a semi-solid nature, with an odor varying from musty to fetid, most of these passages occurring after ten or eleven P. M. and beginning to become less frequent in the early morning hours, about 4 A. M.; some of these passages are followed quickly by others which may be of small amount.

When rectum and sigmoid are ulcerated, diarrhoea is not a prominent symptom, but may be found occasionally; formed stools are the rule, but rectal pain is prominent and blood is usually found coating the passage with more or less mucus attached. Tenderness over the sigmoid on palpation, and rigidity of the muscles in the lower left quadrant, will be found.

Frequently we have ulceration in several of these areas at the same time, and some of the symptoms of the involvemen of one area may be masked by the effect of the ulceration being greater in the other. The "surgical" or "hypertrophic" type carries with it a different train of symptom than those with which we have just been dealing, here symptoms seldom make their appearance until obstruction begins to take place and here the train of symptoms first described by Goenig are all prominent.

During an attack the abdomen is dis tended with gas, and the peristaltic move ment of the bowel is visible over the ileo caecal area and for some distance around it; gurgling and splashing sounds are heard over the lower half of the abdomen, mos marked in the valve area; pain, graduall ceasing, accompanies the attack; the gur gling subsides, the abdomen flattens, and the attack ends. Now a tumor mass car be made out, extending along the bowe having no definite outline, but extending irregularly over a considerable area. Blooand pus are seldom found in the passage in this form, and the bowels are frequentl constipated.

DIAGNOSIS:

Here we must consider four methods o procedure in order to arrive at a correct diagnosis of the "ulcerative type."

1. Physical,—consisting of inspectio of the abdomen and its palpation, for mus cular rigidity and tender areas, couple with the symptoms enumerated above. \$ Chemical,—consisting of a chemical exam ination of the feces for "occult blood" an of the urine for the diazo reaction. Microscopical,—examination of the fece for tubercle bacilli. A few tubercle bacil in the feces point more to sputum havin been swallowed; but where a number ca be found scattered throughout the specime it is without doubt enteritis infection. Bacteriological,—if in doubt, by animal ir oculation of the feces for Tubercular ir fection.

In the "hypertrophic" or gurgical typ the diagnosis is made mostly by exclusion The commonest form of intestinal tumofor which this type of tuberculous enteriti is mistaken is carcinoma; but if in exanining these cases, the following points wibe considered, a mistake will seldom b

⁷ Deutsche Zeitsche f. Chirurge, Bd. XXXIV, 189 S. 65.

made. First the fact that it occurs in those suffering from a pulmonary lesion (occasionally a bone lesion), hence is usually found between the age of 18 and 35 years, as a rule too early in life for carcinoma. Its course is of a chronic nature, no well defined tumor can be palpated, but in its place an irregular tumor-like mass extending along the course of the intestines, with the marked symptoms of stenosis. Tubercle bacilli may be present in the stools, if ulceration has taken place, but pus and blood seldom; and the diazo reaction will usually be present. Of marked importance is the fact that these cases are seldom without fever.

TREATMENT:

First, there is the dietetic; secondly, the therapeutic. Much of the comfort to be given these patients depends on the character, amount, and preparation of their diet.

As we have seen the larger percentage of cases are affected in the lower portion of the ileum and from this area to the rectum, we should therefore include in our diet only those articles largely acted upon and absorbed above these points and of which the residue and the chemical change is minimized; this on first thought is a comparatively easy matter, but remembering the facts that I have endeavored to make prominent, viz:—that we have all degrees of catarrhal inflammation to deal with, as well as Gastroptosis and Atony in most of these cases, it becomes a difficult problem.

DIETETICS:

Before endeavoring to lay down a strict course of diet for these cases, I examine for gastroptosis and gastric motility; and I follow this by a microscopical examination of the feces, for digestion (by the method of Schmidt) of meat, starches and fat, then I set a sample of feces in the fermentation tubes (Schmidt modification of Strasburger's) in the incubator to determine whether fermentation or putrefaction material is in excess. Following this I examine the urine, quantitatively, for indican, to check up in case of putrefaction in the Schmidt tubes. If the microscopical examination of the feces shows excess of meat, starches or fat, that particular article of food is ordered only in small quantities in the diet.

If my fermentation tubes show that putrefaction has taken place, and the urine

shows high indican values, the meat, eggs and milk products are diminished and the urine watched for the decrease in the indican. My method for quantitive estimation of indican, is to use the number of drops of a saturated solution of chlorate of potash, necessary to decolorize the solution after the addition of HCL & Hypochlorite of soda and before the addition of the chloroform; although this can be accomplished just the same after the addition of the chloroform.

If my tubes show that fermentation has taken place, rather than putrefaction, I immediately decrease the sugars and starches to as low a quantity as is consistent with the case, and then gradually increase again, making another test with the tubes in the course of a few days or a week. With this data at hand I am ready to prescribe the nature of food to be taken as well as the quantity and the intervals at which this food is best handled by the individual. Most of these stools took place during the night (from 10 P. M. to 4 A. M.) and to obviate this annoyance we regulate these feedings so that they become lighter as night approaches. As to the character of food best suited for these cases: As we are forced to "balance" the diet, although most of these cases are not ambulatory and can continue to do well on a diet of fairly low caloric value, we must endeavor to find maximum quantity the individual can handle without aggravating any of the symptoms that are so distressing (pain and diarrhoea). I begin with comparatively small amounts and increase as rapidly as possible, while maintaining the same intervals, until the number of passages begin to increase, without increasing the pain; then I omit one of the intervals of feeding, usually the last at night, and if this does not diminish the number of evacuations, begin to decrease the quantity at each feeding, before omitting another interval.

I believe it is well to arrange the articles of diet in order for my readers, so that they can be the more easily remembered; and for this purpose we will begin with the liquids, which consist of meat broths, liquid peptenoids, samatose, barley water, rice water, panopeptone, bread soup, albumen water, and cream and seltzer water, in equal quantities. A glance at this immediately shows those forms which are necessary for "balancing"—proteid, carbohydrate and hydro-

carbons. Then we have semi-solids, as gelatine flavored (with meat juices or flavored extracts), soft boiled eggs, poached eggs, egg custard, curds and whey, force with cream, corn flakes with cream, purees of vegetables, butter, raw eggs. Here also will be found proteid, carbo-hydrates, and hydrocarbons. And last we have the solids, as: scrapped or minced meat or fowl, steak or chops, fresh fish, lettuce with oil, asparagus tips, baked potatoes, steamed rice, zweiback and stale bread.

All fruits and pastry must be excluded as well as those vegetables leaving a residue, such as peas, beans, corn, etc. Water, either plain or some of the carbonated variety may be allowed in such quantities as seem needed for the relief of thirst.

It can readily be seen that by this arrangement any of these classes of foods may be used alone; or a combination of them may be arranged to meet the requirements of the case. Where diarrhoea is the prominent symptom, the liquids only are to be allowed, in such quantity and at such intervals as the case will permit, alternating albuminous fluids with the carbohydrate variety and feeding as much of the fats (cream and seltzer) as seems necessary to increase the caloric value, up to the maximum the patient can easily assimilate.

Where the diarrhoea is being controlled or is absent, or a period of improvement is at hand, semi-liquids and solids may be added. Where diarrhoea is not a prominent symptom, a full combination of these classes of foods may be used, watching closely for any signs of irritation to occur.

as increase of gas or pain.

The intervals at which feeding should take place depend on the severity of the My own preference is to begin to first feeding at 8 A. M. and in the severe diarrhoeal varieties, feed every two hours up to 8 P. M., allowing nothing excepting water after that time until the next morning. Where the diarrhoea is not so severe, I endeavor to arrange two meals, one at 8 A. M. and one at 12 M., consisting of semisolids and solids, and at 10 A. M., 4 P. M., 6 P. M., 8 P. M., feed the liquids. amount at each feeding is guided entirely by the individual, from one to three ounces of liquids in those cases where diarrhoea is a prominent symptom, up to six to eight ounces if the patient can handle that amount without over-feeding being manifest.

Where the meals are allowed, I arrange the breakfast to consist of one of the forms of dextrinized cereals as: Force or corn flakes with cream, soft boiled eggs, poached eggs, toast with butter, a scrapped meat cake; while the noon meal will consist of puree of some vegetable, chop or piece of steak, fish, fowl, baked potatoes, lettuce, asparagus tips, curds and whey or egg custard, alternating the vegetables from day to day, not allowing more than one each meal until the passages become formed. The quantities of the different substances are also limited at first to small amounts. watching the effect on the symptoms formally complained of as well as the passages. and the temperature; increasing them gradually as the case seems to demand.

THERAPEUTICS:

Here a wide range is open to us, for we have to deal with tuberculous and catarrhal inflammations, besides atony and lack of secretion; (and in many cases, gastroptosis as well), with pain and gas accumulation.

If Gastroptosis is present, I have found Rose's belt of adhesive plaster to meet the requirement better than a woven belt, for these patients are usually emaciated and the woven belts make pressure on the hips rather than support the sagging organ.

For the relief of pain, and the accumulation of gas, nothing gives the satisfaction which comes from the application of hot compresses. I order Turkish towels wrung out of boiling water, applied as hot as the patient can stand, to the whole abdomen for a half hour to an hour, three or four times a day, these hot towels to be covered by a piece of blanket or rubber sheeting, after these are removed a Turkish towel wrung out of cold water is applied for ten minutes.

We must relieve and cure, if possible, the concomitant catarrhal inflammation. To accomplish this, nothing I have ever used has been as satisfactory as ichthalbin and tanalbin combined with small doses of podophyllin in the following proportions:

Ichthalbin

Tanalbin, aa zijss Podophyllin, Gr. 1/8

Met ft in chartae No. xxiv Sig. One

after each loose movement. And with this, small doses of castor oil, fifteen drops, night and morning, to aid in

controlling the diarrhoea.

For the tuberculous infection, tuberculin stands out as our only hope of cure. In

1891 Paul Goodman exhibited six specimens of tuberculous intestines that had been healed before the Pathological Society of Berlin. Virchow, the greatest cellular pathologist of that time said he had never before seen tuberculous ulcer of the intestine that had fully healed. All of Goodman's cases had been treated with tuberculin, but had died of pulmonary tuberculosis; however, one shudders to think of the manner in which tuberculin was used at that time. Shortly after this period, tuberculin fell into disuse and it required many years to become again one of the greatest of our means of treating this dreaded disease. For the method of use of tuberculin, I refer my readers to a former paper, published in the Monthly Cyclopaedia and Medical Bulletin, Sept. 1911.

The treatment of the surgical variety depends on the surgeon's knowledge of the underlying tubercular condition; if the lesion is circumscribed and there is no involvement of the peritoneum and no adhesions, resection is to be done. But should the peritoneum be involved or adhesions present, an operation in which this area is side tracked by the formation of an artificial anus, is best, and this procedure is only justifiable where there are marked symptoms of stenosis, and the patient suffering from marked secondary infection symptoms, such as high fever and sweats.

Those cases of tubercular enteritis, with peritoneal involvement and adhesions, if operated on by resection, with end to end or side to side anastomosis, will invariably fail to heal and be left with a fecal fistula.

In these cases they had better be let alone, for tuberculin, combined with proper dietetic and hygienic measures, will accomplish more for them than the surgeon.

HER BABY DIED.

THE hour for the funeral had arrived and neighbors were coming in to the services. The dead baby lay in a little white coffin lined with white satin, was dressed in white, and flowers in profusion decorated the room and testified to the sympathy of the neighbors.

The preacher made a short prayer, uttered a few comforting words, a song was sung, the little baby was borne to the white hearse by four young girls in white, and the procession moved toward the cemetery.

The baby had died from intestinal disorder induced by wrong feeding, yet the preacher had said-"The Lord giveth and the Lord has taken away." The doctor told how it all happened. "That baby," said he, "was born strong and healthy. The mother nursed it for weeks, but finding that nursing interfered with bridge parties and other social affairs provided a bottle, and when she was absent, her aunt, who lived with her, fed cow's milk. This irregularity of breast feeding soon lessened the amount of the mother's milk and she concluded she would cease nursing entirely. The child seemed to do well on the bottle for a while. but it soon became evident that something was wrong. One time I saw the mother give a piece of rich pie crust to her baby and I warned her against doing so. She told me she found the infant liked coffee and a little was frequently given to it. And so, despite my medicines and my warnings in regard to feeding, the child's digestive apparatus gradually broke down. An old grandmother told the mother that it was natural for babies to throw up. Another one prescribed soothing syrup which contained morphine. Another one recommended anise seed cordial, and so it went; the young mother being willing to depend upon drugs and remedies but would not practice prevention by feeding rationally: When the digestive machinery was put to the bad the baby finally took dysentery and died." Continuing the doctor said—"I had three infants die of pneumonia last winter, simply because the mother would not give them air enough. In spite of my instructions that plenty of air made babies strong and protected them against colds and coughs, still they would cover their babies' faces with veils and napkins keeping the life-giving air away. The foolish idea," said the doctor, "which seems to exist everywhere, that fresh, cold air is injurious, must be somehow extracted from the minds which hold the same or else pneumonia dead babies will always be with us."—Dr. J. N. Hurty, in the Monthly Bulletin of the Indiana State Board of Health.

HOW THE HOUSEWIFE'S LEAGUE MEETS THE HIGH COST OF LIVING.

WHEN one woman doesn't get what she wants there is very likely to be trouble; imagine how cyclonic things would be if three-quarters of a million women shouldn't get what they want. That number of women make up the Housewife's League, Nowadays some women want some things it is hardly good for them to have; but what the Housewife's League wants it is unquestionably good for everybody to have. New York Times tells how less than two years ago five women met in Mrs. Julian Heath's home in New York just to discuss formally among themselves the way food prices were climbing; the result is an organization to-day approaching the million mark. Every housewife subscriber to THE GAZETTE (which is strong for the League's objects-fair prices, clean shops, pure food and efficiency in marketing) should apply for membership-active membership in that organization, to the end that its membership shall be several millions, at Why join this League? Following are some reasons:

Many markets, many grocers now display the sign "Owing to Sanitary Reasons Merchandise Will No Longer Be Displayed on the Sidewalk"; the grateful thanks of the patrons of those shops are due the Then there is the Housewife's League. League's inspection work, by which it is determined to obtain the objects above Its members, in demanding the clean shop, say "We buy food in your place. We have the right to know that, so far as you are concerned, it is clean food." So "shop inspector's report" blanks are issued to League members. A member or a committee of members go after a recreant shopkeeper, with chastening intent, examine his place and fill out the blanks. points are covered, ranging from light and ventilation to the condition of the clothes and hands of the salespeople. On the evidence of this report the shop gets a percentage which any inquiring woman may learn. A shop receiving 85 per cent. gets the League's endorsement and its sign to that effect. (The endorsement of a million or so women is surely some advertisement.) Shops receiving 75 to 85 per cent. are marked "acceptable"; but they have to improve even on that or they will get not even this comment. The best thing to do is to try for 100 per cent.—no unattainable ambition; there are not a few 100 per cent. stores. Of course any storekeeper can refuse such an inspection; but this does not appear to be a well-calculated attitude.

GOING AFTER THE FACTORIES, TOO.

The inspection reports cover only the shop and the stockrooms, not to the quality of the goods sold in them. The League proposes in time to extend its inspection to the makers of food products and to rate them also for cleanliness and purity. And in many cities and towns throughout the country the members of this League are working steadily and persistently for reforms big and little. In Providence, R. I., there has been an egg campaign, and others against improper labeling, illegal weighing, failure to meet advertised prices and for a terminal market system. In Buffalo they have been waging fruit, egg and milk campaigns; the members have bought co-operatively securing such bargains as the best apples delivered at the home for \$1.20 the bushel, potatoes at 80 cents the bushel, "large, luscious Florida grapefruit" at 4 cents apiece and much else at corresponding prices. The Portland (Maine) league wasn't a month old before it started a "sanitation and cost" campaign. In Toledo, Ohio, the league began by asking the City Council to change the new city market from one kept solely for commission men and merchants into a market open at all hours to retail buyers. The Louisville, Ky., associated housewives are demanding that all fresh meats be screened; and their placards "This Grocer Screens His Meat" are provided all deserving dealers. In Yonkers the housewives are persuading the grocers and marketmen to keep butter, cheese, bread,

pastry and the like under glass; and to transfer vegetables from low bins and other floor receptacles to elevated stands out of reach of floor dirt and animals. (By the way, the League won't stand for rats and mice in any establishment—positively not!) In Lexington, Ky., where icemen discontinued the practice of weighing the ice, the housewives have contended that if drivers were to guess at the weight, the customers should be allowed to guess at the bill. In San Francisco the league are urging housewives to do their marketing in person and to abandon the telephone habit. In Flushing, New York, the housewives had a fine clean-up campaign against flies and mosquitoes. In Ithaca, New York, the slogan is "Every Housewife an Inspector"; and they are working for a simplified delivery system, so that merchants will give the consumer the benefit of this reduction in his expenses.

And think of what Detroit, Mich., is doing: Its several thousand League members are divided into chapters, each with its separate officers. The chapters meet once a fortnight to exchange information and opinions. Members are given the names of milk dealers who will furnish them with good pure milk at 8 cents the quart, the dairies furnishing this are all inspected regularly by members of the Milk Committee. And members are furnished with grocery lists from which they may order at wholesale prices plus a small percentage for delivery. Members wishing to buy dry goods (house dresses, children's garments and so on) can get them from the manufacturer (whose factory is inspected by a committee); any article wanted by a number of the members is ordered by them direct from the factories, cutting out the profits of from one to five middlemen. And they can get a discount on goods sold by a famous pure food house that carries only the best products, which it sells below the usual retail prices.

Honor to Whom Honor is Due. Domestic servants in France who can prove that for thirty years they have been good and faithful, are entitled to wear tri-colored ribbons in their buttonholes. Who more worthy? There are plenty of people preaching the gospel service; all honor to those who are preaching that gospel every hour in the day. (And whilst thus honoring servants let no one forget the homage due their mistresses; for what praise can suffice

bers are furnished with the names of farmers who will sell them direct all kinds of produce. They require bread to be wrapped in paper for sale. They inquire into the conditions under which women and children work in canning factories. They pay a "visiting housekeeper" to go into the tenements and teach "home making." They co-operate in a movement to prevent the sale of live stock that has been crippled, frozen or strangled in shipment.

The Oranges in New Jersey (all of them) have now a housewives' legal committee. In Charleston, S. C., two of the League members are on the City Market Commission; one of their activities is fighting for non-poisonous matches. And men are wanting to join; and why not, since they are eating (and sometimes paying) for a good share of the food these housewives are buying. In St. Paul the League have decided to let men come in. And a monthly magazine is being published by the League—a very good and interesting one, too; and a permanent housewife's exchange is being contemplated for New York.

The ground floor will have a large room, with a huge blackboard across the rear wall. Behind this will be a telegraph office and a bulletin operator. On this board will be posted the prices of various products, with comments. In the basement will be a shipping room. When produce is being withheld from market by commission merchants the farmers, poulterers and dairymen will be invited to ship their products direct to this exchange. One of the most important features of this exchange will be a laboratory for testing food as to possible impurities.

The womenfolk of to-day are disposing of their surplus energy in ways more or less excellent, such as were not dreamed of in their grandmothers' philosophy; there can be no better way of doing this than by joining a housewife's league and really working in it.

for a housewife who has so treated a domestic that the latter has been contented in her service during thirty years!) Harper's Weekly relates that a new order instituted by laws passed this summer is now being enlisted—the Order of Distinguished Domestic Service. "The plan is a credit to a nation already famous for ideas that combine practicality and sentiment. That humble service may assert a legal claim to a sphere of rank and distinction sounds like a corollary to noblesse oblige."

RURAL SANITATION.

COUNTRY SLUMS...

ALTHOUGH half the people of the United States live in the country, more efforts have been made for sanitation in cities than in the country. This is because the crowded condition of cities compels attention to public health. There are slums in the country as well as in the city; and the former are just as much as the latter breeding places of infection dangerous to the whole people. Countrysides where ignorant, shiftless inhabitants settle and neglect the conditions of health form the rural slums.

Intelligent rural neighborhoods, states Dr. Walter M. Coleman, in his fine Handbook of the People's Health, give to our country its most vigorous citizens; but rural slums supply a greater proportion of the inmates of insane asylums than any other class of people except the very rich in cities. health survey of one western county showed the farm homes within it were worse ventilated than the homes of the largest city in the same state, and consumption was as frequent in this county as in the largest city. An examination of the stock of the country stores in villages in malarial districts of two different states showed that two-fifths of the shelf room was taken up with patent medicines. Attempts to keep in health by the aid of patent medicines give a fair measure of the lack of sensible efforts toward the same purpose.

In the country the annual death rate for

each 100,000 people is as follows for several diseases: Tuberculosis, 136; intestinal diseases, 121; bronchitis and grip, 90; pneumonia, 83; diphtheria, 17; whooping cough, 12; scarlet fever, 8; measles, 8. The country death rate is increased and the city death rate is lowered because so many sound, healthy people move from the country to the city.

Because so little community of interest is felt in the country, greater personal responsibility rests upon the head of each household. Public sanitary control is hindered by the isolation and independent mental habits of the former. In country slums a farmer sometimes even gets angry because his child is excluded from school. Progress is best gained by appeals to the intelligence of educated citizens, and by the spread of education.

Official supervision of public health is needed everywhere. Sanitary districts should not be laid out according to settlement unless the population is sparse, but according to watersheds and drainage. The people of the districts may elect district health officers who will pledge themselves to carry out the orders of the county health officer. The district officers in convention choose for county health officer one who has passed the examination required by the State Board of Health, or one who has a diploma in public health preventive medicine.

NOT FOR PRACTICAL PURPOSES.

Dr. W. P. Barron, Carmona, Texas, writes: We have in this section among the negroes a new church called the "Church of God." They teach footwashing as a divine ordinance, the non-use of wine for the sacrament, not to drink wine, grape juice, or to eat grapes, raisins, etc. A few days ago they had a grand pow-wow, which I attended. They had many candidates for baptism

and foot-washing and I suppose the presence of white people must have also impressed the fat negro preacher who presided. In announcing the hour of these ceremonies for the next day, he said, "I want you niggers to be shore and understand that this here feet-washing is ceremonious, it ain't practical, and I wants you to come here with them feet of yourn clean."—Jour. Am. Med. Assn.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

Leisure Hour was pounded in the belief that the physician is but human; that he lowes the beautiful in thought and sentiment as expressed in literature, and that he is at times surfeited with technical matter. Short, crisp contributions on any of the subjects named in the sub-heading are invited to this department.

DIE and depart, Old Year, old sorrow!
Welcome, O morning air of health and strength!
O glad New Year, bring us new hope tomorrow,
With blossom, leaf, and fruitage bright at length.
—Celia Thaxter, Atlantic Monthly.

THE ORIGINAL AVIATOR.

To scale the empyrean is altogether in keeping with the passion of humankind for mastering its environment. The liking, not only to contemplate the ether, but also to be in and of it, is as old as our glorious race—at least as old as mythology, which is a true and graphic record (unburdened by such superfluities as exact dates and details) of human deeds and human proclivities.

No reasonable mind doubts that there was once upon a time a man and his son (called for convenience Daedalus and Icarus), who set about inventing a flying machine. They were imprisoned on an island; the father reasoned that his captor could control the land and the sea, but not the regions of the air. "I will try that way," declared this antediluvian Wright. So he fabricated wings for himself and for his son by fastening feathers together (avers the veracious Bullfinch), beginning with small ones and adding larger, so as to form an increasing surface. The larger ones he secured with thread, the smaller with wax (there was the mistake); and gave the whole a gentle curvature like the wings of a bird.

The work done, the superb artisan, waving his well-wrought pinions, found himself buoyed upward; and was able to poise himself on the thuswise beaten air. Next he likewise equipped his son; and taught him how to fly, as a bird tempts her young ones from the lofty nest in the air. Icarus was warned to keep to a moderate height: "for if you fly too low the damp will clog your wings, and if too high, the heat will

melt the wax. Keep near me and you will be safe." Thus together they flew off; and as they flew the plowman stopped his work to gaze and the shepherd leaned on his staff and watched, astonished at the sight, and thinking they were gods who could thus cleave the air.

But the boy, exulting in his flight, began to leave his parent's guidance and to soar aloft, as if to reach heaven. And this was his undoing. The nearness of the blazing sun softened the wax, as the father feared; and the "unfaithful wings" came off. He fluttered with his arms, but no feathers remained to suspend him in the air. Rushing headlong through "the affrighted air," his cries to his father were submerged in the Blue Aegean.

How futile, in considering human nature, were it to make any distinction of eras, as of ancient or modern. So long as our environment has been as we know it, the Promethean tendencies of our race and its splendid aspirations, have been all of a For the ill-fated Icarus read any one of dozens of names that have in recent years been most pathetically recorded; for the ancient plowman read the modern farmer (who has been known, shameful to state, to point a hostile weapon); for the shepherd read the man of affairs gazing in amazement from his office window; for the melting wax read detached rudder, or broken propeller or gasoline given out; for the affrighted air, read that terribly treacherous medium through which, all unaware, the aerial adventurer (how perfect soever his precautions) drops nevertheless suddenly hundreds of feet, like a shot fowl; for the headlong rush read the turning-turtle: and you have practically the description you will read almost any summer morning over your coffee and rolls.

No matter what the philosopher has to say to the contrary, man persists in the presumption of holding the cosmos to be anthropocentric; aviation is prompted by the same unquenchable spirit which determines to find the poles, to plant the magnificent human foot upon the loftiest peaks, to probe twenty thousand leagues beneath the sea—that spirit which may, conceivably some generations hence, be doing things to Mars.

The adult ambition of aviation is but the ideal of a child's fairy tale come to maturity and made real. The race has ever yearned to ride on the wings of the morning, the better to see the glories of the universe. Byron struck home unerringly, when he wrote of clouds in a moonlit sky:

"Bespangled with those isles of light, So wildly, spiritually bright:
Whoever gazed upon them shining,
But turned to earth without repining;
Nor wished for wings to flee away
And mix with their eternal ray."

"The Ploughboy," by Madison Cawein, in "Minions of the Moon" (Stewart & Kidd):

A lilac mist makes warm the hills, And silvery through it threads a stream: The redbird's cadence throbs and thrills, The jaybirds scream. The bluets' stars begin to gleam, And mid them, whispering with the rills, The morning-hours dream.

The ploughboy Spring drives out his plough A robin's whistle on his lips; And as he goes with lifted brow, And snaps and whips His lash of wind, a sunbeam tips, The wild flowers laugh, and on the bough The blossom skips.

The scent of winter-mellowed loam And greenwood buds is blown from him, As blithe he takes his young way home, Large, strong of limb, Along the hilltop's sunset brim, Whistling; the first star, white as foam, In his hat's blue rim. Man has indeed an instinct for the stars—among them lies his idea of perfection; the church steeple is symbolic of the human arm stretched yearningly heavenward. In such aspiration man defies and despises consequences; in its pursuit he freely gives both life and limb—as has for almost a decade past been so often and so dreadfully demonstrated.

We imagine, however, the birdman, aloft, is not thinking such things as these, is not quoting poetry to himself. Of course sentiment aplenty is stowed away somewhere among the subliminal strata of his consciousness, else he wouldn't be a birdman; but for the time being he is vastly busy with things eminently practical—the right chugging of his motor, the tricks of the atmosphere, the tri-dimensional steering he has to do. And when he comes down from his eagle flight he does not express himself in beautiful figures (at least has not been so reported) but asks instead most urgently for a cigarette, a sandwich and a mug of something substantial. Nevertheless, his deeds are worthy commemoration in the most imaginative and the noblest expressions conceivable by those whose less notable business it is to make such records.

THE doctor is a good fellow. His living depends on our getting sick, yet he cheerfully tells us how to keep well. We call him up at 3 a. m., tell him the baby has the colic, and if he doesn't do a tango for our place immediately, we hold it against him all our lives. After he has worked with the little fellow the rest of the night and a part of the day and has gone home and pursued the even tenor of his way for a couple of months and then he happens to mention to us that we owe him a couple or three dollars, we go up in the air and ask him how in the dickens he expects us to pay him before fall. In the fall-some fallwe swap him a runty calf or make him "take it out in trade." He spends his whole life trying to find out what is the matter with us and how to cure us, and we know more in a minute than he would in a thousand years, and we tell him so—at least we tell the neighbors so. If a patient gets well we attribute it to his vigorous constitution; if he fails to recover we put a dent in the doctor's reputation. All of which the doctor seems to consider only a part of his business, and serenely goes about trying to keep us out of the churchyard and himself out of the poorhouse.—Chandler (Okla.) Tribune.

REALISM IN WHITMAN'S POETRY.

By Lewis Dayton Burdick.

THE career of Walt Whitman was a singular one. Few poets have been talked about so much while living, or have been more scathingly condemned, and none have had more valiant defenders. To a considerable extent the literary world has been divided into two hostile camps in relation to him and his works. No other American poet has been so severely criticised as he was by one of them, and to the other, there has never been any really great poet but him.

"Leaves of Grass," Whitman's chief work, as first made up, was published in 1855, when the author was thirty-six. It consisted of a series of poems dealing with current interests and discussing social, moral and political conditions. This volume was extravagantly praised by many English admirers. Ralph Waldo Emerson commended it as containing "incomparable things incomparably said," but when later a more complete edition of it was published in Boston the Massachusetts authorities objected to its sale on the ground of its immorality.

"Who else," said Edmund Clarence Stedman in speaking of the loyalty and devotion of Whitman's friends, "has held even a few readers with so absolute a sway?" Mr. Stedman had himself received a first prize for his poem on "Westminster Abbey" several years before the publication of the first "Leaves of Grass," though he was but twenty-two at this time. Having received marked attention and appreciation as a poet of high rank later, he was also celebrated as a critical writer of ability who wrote interestingly and sympathetically of his fellow writers in verse and of their works, whose opinions, for their candor, learning and graceful expression, received always the highest respect, if not entire approval.

The contrast in the individuality, taste, poetic forms and literary ideals between Mr. Stedman and Walt Whitman is so apparent

on a little reading and comparison of their respective works that one would not look for the former to give the seal of his approval to the more conspicuous realism of the latter; and it was to Whitman's "too anatomical and malodorous" "Children of Adam" that Stedman attributed the public distrustfulness of the poet, which threatened banishment for him from select collections. That virility may be bred from, and a weakling race made strong by, rankness and coarseness, this poetic-critic declined to concede.

As upon all other questions raised over the peculiar characteristics of Whitman's writings, there is a wide difference of conclusions as to whether his cataloguing realism was the outcome of natural eccentricity or the result of studied affectation. The former may be endured, the latter is not without protest tolerated.

The body of Whitman's poetical production is extensive, and the greater part of it may be classed as realistic, yet the few occasional poems that have most reached the hearts of the masses, for which he may, perhaps, eventually be best remembered and most loved, are those less conspicuous for their realism. It is, however, in those in which realism is most accentuated that the merits, or demerits, as the case may be, have been found, that have given him his widest publicity, on account of which, he has been both ostracized and honored. Will this distinct characteristic, repelling and offensive as it sometimes seems, give the author permanent fame and literary immortality?

The following lines are from the well-known "Children of Adam":

"O my body!

I believe the likes of you are to stand or fall with the likes of the soul, (and that they are the soul),

I believe the likes of you shall stand or fall with my poems, and that they are my poems,

Man's, woman's, child's, youth's, wife's, husband's, mother's, father's, young man's, young woman's poems,

Head, neck, hair, ears, drop and tympan of the ears,

Eyes, eye-fringes, iris of the eye, eyebrows, and the waking or sleeping of the lids,

Mouth, tongue, lips, teeth, roof of mouth, jaws, and the jaw-hinges,

Nose, nostrils of the nose, and the partition, Cheeks, temples, forehead, chin, throat, back of the neck, neck-slue,

Strong shoulders, manly beard, scapula, hind-shoulders, and the ample sideround of the chest.

Upper-arm, arm-pit, elbow-socket, lowerarm, arm-sinews, arm-bones,

Wrist and wrist-joints, hand, palm, knuckles, thumb, forefinger, finger-joints,

Finger-nails,-

O I say these are not the parts and poems of the body only, but of the soul,

O I say now these are the soul."

If it be said that this passage is an exceptional one and is not to be taken as a symbol of the whole, it may be granted, but it is also true that none of the most censurable and objectionable features of this poem are included in these lines.

But from Whitman the incomprehensible and eccentric, one turns with delight and admiration to other lines of the good gray 'The brooding and blissful halcyon days!"

poet, in which, as in "Old Age's Lambent Peaks,"

"The touch of flame the illuminating fire the loftiest look at last,

O'er city, passion, sea-o'er prairie, mountain, wood-the earth itself;

The calmer sight—the golden setting, clear and broad,"

the divine spark pressages immortality, for through them we perceive, as he says,

"The delicate miracles of earth,

Dandelions, clover, the emerald grass, the early scents and flowers,

The arbutus under foot, the willow's yellow-green, the blossoming plum and cherry;

With these the robin, lark and thrush, singing their songs—the flitting bluebird;

For such the scenes the annual play brings

Happy the man who with him can sing: "But as life wanes, and all the turbulent passions calm,

As gorgeous, vapory, silent hues cover the evening sky,

As softness, fulness, rest suffuse the frame, like freshier, balmier air,

As the days take on a mellower light, and the apple at last hangs really finish'd and indolent-ripe on the tree,

Then for the teeming quietest, happiest days of all!

THE BEGINNING.

WHERE have I come from, where did you pick me up?" the baby asked its mother.

She answered, half crying, half laughing, and clasping the baby to her breast:

"You were hidden in my heart as its de-

sire, my darling.

"You were in the dolls of my childhood's games; and when with clay I made the image of my god every morning, I made and unmade you then.

"You were enshrined with our household deity, in his worship I worshipped you.

"In all my hopes and my loves, in my life, in the life of my mother, you have lived.

"In the lap of the deathless spirit who rules our home you have been nursed for

"When in girlhood my heart was opening

its petals, you hovered as a fragrance about

"Your tender softness bloomed in my youthful limbs, like a glow in the sky before the sunrise.

'Heaven's first darling, twin-born with the morning light, you have floated down the stream of the world's life, and at last you have stranded on my heart.

'As I gaze on your face, mystery overwhelms me; you who belong to all have become mine.

"For fear of losing you I hold you tight to my breast. What magic has snared the world's treasure in these slender arms of mine?"—From "The Crescent Moon, Child-Poems" (Macmillan), by Rabindranath Tagore, translated from the original Bengali by the author.

DIAGNOSTIC VALUE OF DREAMS.

FREUD'S psychanalysis is to psychism what the microscope is to the tangible, pathological lesion; it is a revelation of the mind; a turning of it inside out. The method is especially applicable to the border line cases of mental aberration, to cases of patients not obviously insane nor fit to enter asylums or hospitals, but such as are seen in ordinary practice and are found in dispensaries-neurasthenics, clinics and psychasthenics, hysterics, sufferers from mild forms of the functional psychoses (not conditioned on structural nervous lesions), at worst the half-mad (les demi-fous of Grancher). Freud's method is not for the management of neuropathic degeneration; but it is on the contrary limited by it. "If one wishes," he has declared, "to take a safe course he should limit his selection to persons of a normal state. Psychoses, confusional states and marked (I might say, toxic) depressions are unsuitable for analysis, at least as it is practiced to-day." One must consider also the patient's age: the youthful are excellent subjects; but the patient after fifty lacks on the one hand the plasticity of the psychic processes upon which the therapy depends (for the elderly are no longer educatable), and on the other hand the material which has to be elaborated. In the elderly the duration of the treatment is inversely increased. Nor can one expect to become a proficient psychanalyst after the Freud method who has not mastered at least his theories of the neuroses, his interpretation of dreams, his sexual theories and his psychopathology of every-day life. Another essential is that physician and patient shall be absolutely en rapport: one may get excellent results in surgery without seeing the patient's face;

¹ Brill, A. A., Psychanalysis, Its Theory and Practical Application. (Saunders, Phila.)

but psychanalysis presupposes and requires intimate relationship.

Psychanalysis may begin with an investigation of the patient's dream life, because dreams afford reliable information concerning the individual, and invariably show some relation to the symptoms. Dreams play a very important part in the individual's psyche. Brill's procedure is to have the patient write down his dreams on awakening. Then the dream is analyzed. Thus is the physician helped not only in the interpretation of symptoms, but also in diagnosis and treatment, to the end that fears, delusions and obsessions may be relieved and removed, by a demonstration of their inception and their absurdity.

Brill considers that psychanalysis is the only system of psychotherapy dealing with the neuroses as entities; herein it differs from the management of symptoms merely, as by hypnotism, suggestion and persuasion. Psychanalysis always concerns itself with the patient's personality, probing into the deepest recesses of the mind; and only by this procedure (believes Brill) "that we can hope to gain a real insight into the neuroses and psychoses, a thing of prime importance in the study of mental prophylaxis."

Brill concludes then, concerning the analysis of dreams, that: Dreams are perfect psychological mechanisms, having a definite meaning and containing a wish fulfillment. Every psychotic symptom is the expression of a former mental occurrence and symbolically represents a wish fulfillment. The repression of the unconscious is at the basis of both the dream and the psychotic process. Dreams are the product of the unconscious and hence afford the easiest access to the exploration of the neuroses.

THE THE THREE GIFTS OF LIFE. A Girl's Responsibility for Race Progress, by Nellie M. Smith, M.A., Lecturer for the Society of Sanitary and Moral Prophylaxis, New York, with an introduction by Thomas D. Wood, A. M., M.D., Professor of Physical Education, Columbia University, New York. Dodd, Mead & Company, 1913. Three things women can do to help the

race progress: seek the best in themselves; demand the best in men; and teach little children how to use their gift of choice. The author, in this excellent book, considers sanely and sympathetically how womankind may attain these gifts sanely—which cannot be said of a great many present day publications on the rather overworked subject of sexual hygiene.

BOOK NOTICES.

HYGIENE AND SANITATION. A Text-Book for Nurses. By George M. Price, M.D., Director, Joint Board of Sanitary Control; Director of Investigation, New York State Factory Commission. 12mo., 236 pages. Cloth, \$1.50, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

In preparing this text-book Dr. Price handles clearly and concisely a group of subjects with which he has long been conversant as a practical worker and an author. His earlier writings, "A Hand-Book of Sanitation," "Tenement House Inspection," and "Epitome of Hygiene and Public Health," have proven his fitness for the task of selecting the essential elements of the science of Hygiene and Sanitation, and presenting them in a form acceptable to the trained nurse and the general reader.

The book is most appropriately dedicated to Lillian D. Wald, "The pioneer of public health nursing in the United States, and the foremost advocate for the extension of the scope of the nurse's work." He declares that the nurse has "become one of the most important conservators of human life, and her role in the prevention of disease and premature death cannot be overestimated." That he has given the nurse an admirable aid to her work in this role is amply proven on every page of his book.

The author is eminently successful in presenting a complete survey of his subject in such a compact form because he has eliminated all that is not hygiene and sanitation. He does not cumber the pages with details of anatomy and physiology, nor does he tell the nurse how to care for her patients who are sick in bed. He strips his subject of all irrelevant matter. Beginning with the hygiene of habitations, the importance of good housing conditions is made Ventilation and plumbing are very clear. treated with considerable detail. The pages on dust, dirt and housecleaning ought to be read every day by beginners in the art of housekeeping until they get the habit of regarding their functions in the same light as the author. Why, he asks, should women gather the dust and filth of the streets upon their skirts and bring it into our "sweet homes," and why should not all of us follow the custom of the "benighted Orientals"

and remove our dirty shoes when coming within our clean houses? The hygiene of foods receives its full share of attention and the whole subject of milk and dairy products is given the prominence that it demands to-day. A chapter is devoted to schools, and the functions of the school nurse are given in detail. Municipal hygiene and the effects of occupations upon health are treated in a practical way, of special service. to nurses whose work brings them into relations with employers or officials of the municipality. The chapter on personal hygiene presents the essential principles underlying right living and gives a good epitome of the art of prophylaxis.

We are safe in saying that no other book contains in such readable form a complete and reliable treatment of the many subjects that are correlated and taught in Dr. Price's latest volume.

Obstetrics for Nurses, by Joseph B. De Lee, M.D., Professor of Obstetrics, Northwestern University Medical School, Chi-New (4th) edition. Philadelphia and London. W. B. Saunders Company, 1913. Cloth, \$2.50 net. This book, dedicated to "The woman about to become amother or with the newborn infant upon her bosom, whenever she bears her tender burden," is intended primarily for nurses. But medical students will find it valuable. also, since a nurse's duties often devolve upon the medical fledgling in his early years of obstetrical practice. The fourth edition is now before us; in it both text and illustrations-the latter being many, graphic and most instructive—have been thoroughly worked over. Several subjects have been added—on the after care of fistular operations, Momburg's treatment for hemorrhage and blood transfusion, whilst the all-important section on Infant Feeding has been revised by Dr. F. X. Wells.

THE TAINT, by Henry B. Hallen, Ph.G., M.D. The Open-Eye Publishing Co., Chicago. This book exposes the dangers of venereal disease; and the author has gathered many facts which should be known. The consulting room of the family practitioner is, however, by far the best place in which to acquire the information.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M. D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

IDEALS IN PRACTICE.

Life and literature need the inspiration which idealism quickens and promotes.—A. B. Alcott.

PRACTICAL is the magic word to-day. There is so much to be done and it all has to be done so soon that we have no use for any one but the "practical" worker. We want "practical" books, journals, sermons, schools and practical people to do all our work. Is not the "practical" nurse still in vogue?

Now there is no objection to the practical worker; indeed he is a most comfortable being to rely upon when you have any difficult labor to be done; but if he is merely practical he is like a machine, he is no better than so much work per day.

If, on the other hand, the worker is an idealist and while he works is looking steadfastly toward his vision of THE BEST he is much more than a machine—he is inspired, he is acquiring that rare accomplishment which we call culture. Work is ennobling and no amount of work can deprive the toiler of his portion of culture.

It is not the work that prevents us from rising above the working level, but it is our own sad lack of ideals. If we look merely at the material results of our labor we lose all the inspiration and nobility that ought to accompany any work well done; our occupation is just a "job."

This is why the practical person is so often superficial, with no depth of knowledge and no height of ambition—insipid and uninteresting because deficient in ideals and inspiration.

"The best thing in every noble dream is the dreamer himself," says Conway. Through the cherishing of his ideals he engages in a nobler and more permanent work, "he is part of the organizing force of the universe," and his own life becomes sweeter and more dignified.

If you would live your own life and not merely the life forced on you by circumstances, if you would cultivate your spiritual nature and not leave its development to chance influences, do not stifle your dreams of the ideal.

HAS THE NURSE FALLEN FROM HER PEDESTAL?

Some months ago we printed a letter in which a "practical nurse" makes rather serious accusations against graduate nurses as a class. At last a trained nurse has come to the rescue and we are glad to refer our readers to her letter in the Correspondence columns. Criticisms continue to appear however, and it would seem that many members of the profession once idolized in popular thought are conspicuously lacking in those ideals that every profession should cherish. Let these quotations speak for themselves. The Critic (London) says:

Many of these so-called trained nurses are ignorant and arrogant, and not a few

of them are insidious adventuresses. It follows that they are noisy and tactless, for they simply regard their patients as pieces of furniture. Anyone who has had any experience of the inside of a hospital knows what fiends in human form these creatures are. They are positively inhuman in their treatment of suffering patients, and it is not going too far to say that their conduct constitutes a grave scandal.

The Pall Mall Gazette is not at all behind its contemporary, as this declaration shows:

It would be as reasonable to describe cooks as a noble body of women who go through the world seeking to feed the hungry as to describe nurses as devoted women seeking to relieve human suffer-

ing. Each is, in most cases, a girl with no means, trying to earn her living. . . . Ask leading London doctors for their opinion. I have heard them describe nurses as "perfect fools," "fit only to be kitchen-maids," and so forth. And the lay public frequently describe them to each other as "she-devils," which is, of course, very vulgar and exaggerated.

The British Journal of Nursing finds in these diatribes a strong argument for the state registration of nurses, and naturally takes the ground that many if not all of the criticisms are warranted by the facts as they exist in England. The Journal says editorially:

When one calls to mind the many women one has known who have devoted, and are devoting themselves to the care of the sick one feels hotly indignant at such strictures, but we must remember that nurses themselves are much to blame for such attacks. Their predecessors won for them the reputation and honorable position in public estimation they received, and the special duty devolving upon this generation was to carry on that work a step further and to demand protection by registration and organization, of competent nurses, and their differentiation from quacks who pose as and bring disgrace upon the members of a profession to which they do not belong.

A faithful minority have accepted and done their utmost to discharge this duty, but owing to the negligence of many nurses in shirking this responsibility whether from indolence, apathy, or self interest, numbers of women who are ignorant, incompetent, or criminal pose as nurses, and the public estimate the genuine article largely from their acquaintance with the spurious one, so that it is possible for nurses to be described in the Press in the terms we have quoted above without exciting even a ripple of protest in return.

In alluding to these affirmations a correspondent of the *British Journal of Nursing* makes the following somewhat frenzied observations:

It is no good pretending nurses are popular as a class; they are not. I have been a private nurse for many years, and have been compelled to work with many ignorant and unscrupulous women. The marvel is how so many certificated nurses can be as ignorant and unmannerly as they are. The training in many hospitals must be far from high-class. I have recently been visiting a patient in one of our largest country hospitals, and just to sit and watch how things were done—the slap-dash methods, noise, and general lack of discipline made me shiver. I longed to complain, but feared to make mischief. What sort of nurses can be turned out of such a place? No wonder the public uses strong language when subjected to their handling. The Sister had no "h's," nor had her subordinates. The Staff Nurses

talked of the Visiting Surgeon as "the old Probationers gave and removed bedpans without covers, preparing dressings between whiles! Knives and forks were kept in wooden lockers, being wiped on newspaper and returned to the locker unwashed. In making beds, the sheets and blankets were pitched on the dusty floor. The system of washing the patients was a mere lick-and-promise, the nails never being attended to, and the food was badly cooked and carelessly Everyone shouted, and stumped about in clumsy shoes and banged doors. If I had been ill and in pain I think "She-devil" would have been the description I should have been inclined to give of some of these uncouth women. The worst of it was that everyone (excepting the poor patients) appeared quite satisfied with the system, and I was informed "Matron objects to Registration, as it would place all nurses in one standard, and stultify all real progress"! I wondered what an expert Nursing Inspector would have reported of the standard of nursing in practice at this terribly-mismanaged institu-

If registration will cure these ills we ought all to pray fervently for registration. The GAZETTE believes in registration and knows full well that it is a policy calculated to improve the standing of nurses as members of a trained profession. But we have always maintained as we do now that no amount of registration or other legislation will keep the profession in good standing with a long suffering public. Because registration "helps business," to use a trade expression, it does not necessarily confer sweetness nor ideal faithfulness on the R. N. And that is the reason why some very good people would just as soon or rather employ a "practical" nurse in their homes. How does this thing look to Americans, who have had the benefits of registration for several years? The article by Dr. Kenerson, which we print in this number of the Gazette shows how the matter is viewed by a surgeon who has had practical experience in meeting the problem of the small hospital. Further insight into this unsavory question may be had by reading the following thoughtful editorial which we quote in full from the News Letter:

The more one travels about the country and talks with people who employ trained nurses, whether private individuals or other nurses at the head of hospitals or nursing associations, the more one is impressed with the faults of the trained nurse. One would expect to find her self-forgetful, energetic, ready to allow for inconveniences, but she is, as a rule, very far from this. When the nurse superintendent of a hospital says that nothing would induce her to try to run a hospital

in which all the service was done by graduate nurses, one feels what a pitiful state of affairs it is. Here is no ignorant public that expects more than anyone who knows conditions has a right to expect, but one who herself has been through the mill and knows the possibilities. And why would she not, could she not, run a hospital with wholly graduate help? Is she unjust to consider the task impossible? Unfortunately no. The average graduate is so set in her own way, so sure it is the only right one, that she will not conform to another's way, however good, thus making anything like uniformity of method among the force impossible. She will not take orders from another nurse, though that nurse is in a position over her. She is exacting as regards hours for duty and time-off and inconsiderate of the patient's comfort and the matron's convenience where they interfere in any way what she considers her rights. Luckily there are nurses who are free from these faults, but it is astonishing how many possess them, serious as they are. The nurse who accepts a position liable to entail night duty and then refuses night calls, is little worse than the one who refuses any case where her night's sleep will be interrupted. Both are thinking more of their own comfort than of that of the patient or the person for whom they work. In a recent book on hospitals, referring to the training of the nurse, the statement is made that the nurse in private practice needs much waiting on and generally upsets the house-hold into which she comes. Though this is not always the case, any one must recognize its general truth. The criticism

the trained nurse gets nowadays is unfortunately founded on actual experience and each individual nurse should watch herself carefully and see that she does not in any way afford grounds for criticism. For it is what the individual members of the profession do that gives the trained nurse her character in the public mind. A nurse may say: "I do not count. I am only one and will do as I please. It cannot affect any one but myself." Alas, it affects all her sister nurses very seriously. So long as she is a trained nurse, her character reflects upon that of the profession. Theoretically, or ideally, the trained nurse has all the virtues in the calendar. Practically, however, she has them only so far as each nurse exercises them.

Another criticism of the trained nurse is that she has no use for the attendant and cannot even see the field that exists for less highly trained service. Yet plenty of people cannot afford the fully trained nurse except in time of very serious illness, and oftentimes the trained nurse is not anxious to go into these households, feeling that services are looked for that do not lie within her province. And yet she seems to begrudge the employment of the attendant or untrained nurse and is not willing, when she meets her, to give her any information that will help her. Let her consider well, however, the real need there is for some one to go into the homes of the middle class for a less price than the trained nurse and help with housework and the children. If she considers the subject dispassionately, she will realize the need and be ready to help rather than hinder its fulfilment.

MENTAL HYGIENE FOR SCHOOL CHILDREN.

By Miss Anna L. Vind, R. N., Brooklyn, N. Y.

MENTAL Hygiene or the science of retaining in health that part of man which we call the mind, is spreading among the people of all civilized countries. Beside the hygiene of the body, it is that knowledge which everybody should possess to a marked degree. There is no question that many cases of nervous prostration might be prevented, if the symptoms were watched in time, and there is also no question that the mind of many persons is abnormal, which is shown in their behavior and in their opinions on common subjects.

Mental Hygiene then should tend to keep the human mind normal, that is, prevent it from becoming deranged, be it ever so little. In order to fully realize this ideal no little labor is required.

We may, for all practical purposes, liken the human body to a delicate mechanism.

as, for instance, a very delicate watch, which, when correctly treated, should keep correct time; the watchmaker being in this case the physician and his assistant the nurse.

As man in his grown up state generally keeps the habits which he has formed as a child, it is essential that good habits be early and properly formed.

We will imagine that we are treating here of the average child who is living with its parents in moderate circumstances.

No doubt the very first thing to bear in mind is the old saying: Mens sana in corpore sano, i. e., no healthy mind without a healthy body. It is beginning to dawn on people more so than before, that in order to be healthy a child should be born healthy. This, however, is not always so, as yet. Nevertheless one must make the

best of what one has. Obviously the most essential thing in the hygiene of the body is good air and cleanliness, and next the correct time allotted to work and recreation, and the time allowed for sleep. A very important part also plays the diet.

AIR.

The proper ventilation of school buildings and homes of the children is of primary importance in retaining the health of the child; also the spending of vacations and the time out of school in the open park or country air, if anyways possible.

CLEANLINESS.

Cleanliness means cleanliness of the whole body, and daily. There can be no question as to the daily bath being beneficial although now and then a scientist claims it to be too much of a good thing, However, a daily removal of the dirt and opening of the pores appears to be better than a weekly forceful removal by means of hot baths or other baths of similar nature. Be that as it may, cleanliness is the first thing to keep the body healthy and consequently the mind which depends upon the body.

WORK AND RECREATION.

A child's work in our time consists mainly of studying the elements of knowledge. This work being mostly of a sedentary nature, effectual counterwork is absolutely necessary, which we very properly call "recreation,"—a new creation of muscie and nerve cells. Unnecessary to say, this recreation or play should be conducted in the open air if possible and should be what it is intended to be,—play, i. e., work for children.

Another form of counterwork is manual labor, namely carpentry work for boys and cooking or similar work for girls, such as caring for their infant brothers and sisters, which has proven very interesting to the grown up girl. Gymnastics and dancing in proper garments also belongs to this category.

SLEEP.

Man has a tendency to methodize everything, so as to set a certain hour for his meals, a certain hour for rising and a certain hour for retiring. There is probably no question that to a certain degree this is correct, but as no two persons are alike, one can certainly overdo this thing.

As to a certain hour for retiring, and in the case of a child an early hour, there can be no question that this observance is to be recommended, but the number of hours for sleep must be left to the need of the individual child. One may probably say that a child should sleep until it is fully rested, that is until it is fully awake, but no longer. This would hardly be less than 10 hours. When we consider that the brain of a child is so much more at work than the adult's, we must come to the conclusion that it needs more sleep, since only the brain rests during sleep. To let children lie awake in bed is a practice which cannot, in my opinion, be too severely condemned.

As in the case of recreation one might say that common sense is the best guide to retaining the health of a child; but then common sense is rather with most persons "uncommon sense," i. e., it is rare.

DIET.

To prepare a good meal, when one has at one's disposal a good cook and an allowance of a goodly sum for household expenses, is probably not very difficult, but it becomes more so when the allowance is slight. However, with good judgment and some instruction it can be done well enough. My mother used to say, if I am permitted to relate it here, one must cook with the heart. And that is indeed a true saying. The heart cooks well and thoroughly, and the rest can easily be learned in any good cookbook.

This country is greatly favored in producing almost any vegetable which can be grown; and vegetables and fruits should in my opinion be freely used, with a reasonable amount of good meat, which has been kept away from flies and upon ice. A good bread is very essential, and is not easily to be had in our country. Ice cream and candy should not be given.

This may probably be all that is necessary to be said on this subject in a general way.

MENTAL HYGIENE PROPER.

Homework.—It is a common practice on such subjects to give a number of "don'ts," but seldom any "do's." And in fact one cannot well get along without any "don'ts." The first thing which one thinks of when discussing the mental hygiene of a child at school, is the amount of homework which a child is compelled to perform, and which in most cases is rather too much. It appears to be a reasonable demand to recommend as little homework as possible. It

certainly dwarfs the elasticity of the youthful mind and brings nothing but harm.

The curiosity of a 7 year old child is greater than that of a 12 year old one, naturally, but only too often the latter one appears to be no more curious at all. In this case his mind has been stuffed like an overfilled stomach.

The great thing therefore seems to be to retain the childish mind in such a condition as to always keep it curious. The way of doing this, one might profitably learn from Rousseau's Emile; it is by not answering questions, but by giving questions to questions or by letting the childish mind work out its own question. But this is rather outside the sphere of a nurse.

BOOKS.

Another thing here to be considered, is the amount of reading and the kind of books to be read by children. The kind of books are selected by libraries and persons well acquainted with the need of the child, and we may hope well selected; the amount must be decided on by parents, and this should not be difficult. No reading by artificial light should be allowed, since the number of children wearing eyeglasses is already so great as to set every thinking person aghast. A greater danger than bookreading is the reading of a bad newspaper although one may hope that the silli-

ness of some newspapers passes through the mind of a child almost unnoticed.

MOVING PICTURES.

Much is said and written about moving pictures, the delight of every child. Taken as a whole, the pictures presented are certainly nothing to be proud of, but then, they will be better some day.

Good pictures seen and properly explained should prove a great benefit to children, whose eyes are more awake than any other of the senses. One thing, however, has always struck me as peculiar, that the apparatus itself is never explained to children, nor are they brought to ask for any explanation. It is as with the telephone, which everybody uses, but few persons know the working of.

EXAMPLE OF PARENTS.

The example of parents as to industry, methodical habits, tidy appearance, proper language and all the many things which a child is only too ready to copy is of the utmost importance. There are, however, not many parents who are not aware of this fact.

Much more might be said on this important subject.

The foregoing discussion may be understood as being held between a nurse and a mother, along this line, but in a more detailed manner.

ORTHODOX JEWISH CUSTOMS IN THEIR RELATION TO THE NURSING PROFESSION.*

By RABBI LEO FRANKLIN, DETROIT, MICH.

It is axiomatic that, next to a knowledge of the technical details of her profession, the greatest need of the nurse who shall attain to real efficiency in her work is sympathy with her patient. I do not, of course, mean by this that soft emotionalism which runs to over-indulgence, nor yet the employment of sweet and honeyed words where sternness is needed to bring a patient to terms, but by sympathy I mean an understanding of the mental attitude of the patient and of his environmental influences that go to shape that attitude. In these days when even the most conservative of medical authorities are conceding the value, within limits of course, of certain forms of mental therapeutics, no lengthy argument should be necessary to establish this

*Read before the Wayne County Nurses' Association, Detroit, Mich., March 7, 1913.

fact as fundamental. A disregard of it may almost invariably explain the utter failure of some otherwise proficient nurses to deal satisfactorily with cases of illness in the homes of the foreign elements that form so large a portion of the population of our great cities to-day. In the case of the Orthodox Jew this is particularly noteworthy. Due to religious customs which, through long usage, have become part of his very life, but which are strange and peculiar to her, the patient is frequently unresponsive to the best-intentioned offices of the nurse who, in the goodness of her heart, is doing the very things which, from the nature of the case, must be absolutely repulsive to her patient. In order that a closer bond of sympathy between the nurse and her patient of Orthodox Jewish faith may be established, it shall be my purpose

in this paper to deal with some of the more important ceremonials practiced by the Orthodox Jew, which have a more or less direct bearing upon the nursing profession. In doing so, I trust that you will understand that I am in nowise censuring the nurse for her misunderstanding of these customs and conditions. From the nature of things she has had no opportunity of learning about them, and they remain a Chinese puzzle to her. Nor do I forget the added difficulty that confronts the nurse in dealing with a patient whose language she cannot understand. Added to all the other hardships and responsibilities of the nursing profession, this is one that may not be lightly passed over. The most obvious solution of this difficulty would be that a sufficiently large number of women, consecrated by a love of the work, who themselves have sprung from the ranks of the Orthodox Jews, should be induced to enter upon the profession of nursing as a life work, but that is undoubtedly a dream, the realization of which will come, if at all, only in the very remote future.

Before taking up in detail the ceremonies that have a bearing upon the problem of the nurse, it is well to draw a clear distinction between what I have called the Orthodox Jew and the Liberal or Reform The Orthodox Jew is he who tries to observe the very letter of the Biblical law, and who recognizes the binding authority upon him of the traditional or Rabbinic law. The Reform Jew, on the other hand, lays little stress upon the letter of the law, but tries to observe its spirit. This distinction may become clearer to you if I illustrate it through an example. the sixth chapter of the book of Deuteronomy, following the remarkable passage "Hear O Israel, the Lord our God, the Lord is One!" we come upon the verses "Thou shalt bind them (namely, the foregoing words) as a sign upon thy hand and they shall be as a guide before thine eyes. And thou shalt write them upon the doorposts of thy house and on thy gates." Now the Orthodox Jew, through a ceremonial known as putting on the philacteries, actually does bind the words cited in the foregoing verses of the chapter, upon his head and upon his arms, the passage being written upon parchment and encased in a little leathern box which being attached to straps made for the purpose, are daily bound, as I have said, upon the head and the arms. thus literally carrying out the mandate of the Bible.

The Reform Jew, on the other hand, realizing that such could never have been the meaning of the lawgiver, interprets this noble passage of Scripture to mean that the words of God should ever be a guiding force in the life of men, directing their eyes to truth and their hands to helpful work. Similarly, the Orthodox Jew interpreting the verse "Thou shalt write them upon the doorposts of thy house" actually does write these words upon his doorpost and you may see them there as you pass into his home, encased in a little tin or wooden box and nailed upon the doorpost. The Reform or Liberal Jew, however, disregarding the letter of the law, as having no significance, holds the passage to mean that God's words shall become an inspiration in every household, that every hearth shall be a shrine where love is the ministering priest.

Now it goes without saying that in the home of the Reform Jew or the Liberal Jew, the nurse will meet with none of these problems that naturally confront her when she enters the home of our Orthodox brethren, whose religious life is very largely a structure of ritualism, formalism and ceremonialism, that to her unaccustomed eyes seems very strange and grotesque, and sometimes even weird and ridiculous. In passing judgment upon it, however, we must not fail to recall that to the foreigner many of our customs seem very strange. I remember hearing a young Chinaman, a splendid musician, at the University of Michigan, say in explanation of the weird character of Chinese music, that to him our great American and European orchestras sounded, until he understood the principles of harmony as worked out by us, merely a medley of the most grotesque and unappealing sounds. To enter sympathetically then into the mental attitude of another, we must know something of the principles upon which that other's life is builded.

I have said that the Orthodox Jew attempts to carry out the very letter of the Bible law. Now something ought to be said, I believe, in regard to the sanitary value of certain laws of the Bible in the light of our modern knowledge, for there are many enthusiastic lovers of the Bible who maintain that not a few Biblical laws, especially those contained in the dietary legislation of the Bible, were intended primarily—if not entirely—as sanitary regulations. With this conclusion I for one take issue. While undoubtedly it seems to be true that those who wrote the portions of

the Bible in which the dietary laws are contained, had a considerable knowledge of certain food values, it can scarcely be maintained that they made their rulings in regard to the prohibited foods purely on hygienic grounds, for were this the case how shall we explain the fact that certain kinds of food which they prohibited to the Jew, they permitted them to sell to the non-Jew for consumption as food? It is perfectly obvious that these laws were laid down not as sanitary, but rather as religious regulations, and that their health value was secondary and perhaps even altogether unknown to the legislators. In one respect perhaps the ancient Biblical law-givers did have a fine conception of what medical science to-day is especially insisting upon. I refer to their laws of quarantine against contagious disease, particularly in regard to that most loathsome disease of the ancient Orient, leprosy. And incidentally I have little doubt that our nurses and health authorities would experience considerably less difficulty in enforcing the laws of quarantine to-day in cases of communicable disease among the Orthodox Jews if their knowledge would permit them to turn authoritatively to this code in the book of Leviticus. (Chap. 14 ff) and show to the often recalcitrant patient and his family that the segregation of persons and places infected is no mere whim of modern physicians, but that it is based on the law to which they themselves give allegiance. And similarly, by the way, the difficulty encountered so frequently in persuading the Orthodox Jews to go to the hospital, where perforce their dietary régime will be broken, might be obviated if the nurse and doctor only knew and could bring home to the patient the fact that in the so-called "Schulchan Aruch" as the traditional code book of the Orthodox Iew is called, it is distinctly set down that in case life is endangered, all the religious laws may be broken with the single exception of those prohibiting idolatry, adultery and the shedding of blood.

Coming now to a somewhat more detailed treatment of the ceremonials of Orthodox Judaism that bear upon the nursing profession, we may say that they have to do with: (a) diet, (b) prayer and ritualistic forms, (c) home ceremonials, (d) religious rites associated with child birth, (e) death and burial.

Of these I mention the subject of diet first, because, by coincidence, it plays such a leading part both in the nurse's profession

and in the life of the Orthodox Jew, and it is upon this point, more than any other, perhaps, that nurse and patient are likely to clash. It should be said in dealing with this subject that the dietary customs observed by the Orthodox Jew go much farther than those laid down in the Bible, and embrace as well the varied and minute extensions of the Biblical law for which mediæval and rabbinical authorities are responsible. When the nurse, who is a stranger to the customs of an Orthodox Jewish home, enters there to attend her patient, she will be struck at once with certain regulations that are entirely strange to her. In the first place she will find that many articles of diet which she is accustomed to give to her patients, are here absolutely taboo. Ham, for instance, indeed any form of the meat of the swine, is entirely forbidden. Oysters and other sea foods she cannot give her patient. Indeed, she will find that the Orthodox Jew rigidly insists upon the observance of the Biblical law that in the realm of animals those are prohibited for food which do not chew the cud and which have not the cloven hoof, or which lacks in either one or the other of these matters, and so far as fishes are concerned, those are prohibited which have not both fins and scales, a prohibition which as you will see includes all forms of shellfish and other sea foods which are frequently given as delicacies to convalescent patients.

But the difficulty of the nurse will not end when she knows what dishes must be absolutely excluded, for she will find that even among those permitted as food, there are certain mixtures which shall in nowise be allowed. Milk foods and meat foods cannot be eaten together or within stated intervals of one another. Generally it is accepted as law that food made with milk or butter may be eaten within three hours after partaking of a meal of meat, while if the process is reversed, the meat may be eaten within half an hour after the milk. As though this were not sufficient to confuse the poor nurse, she must be further confounded by the fact that there must be one set of dishes used for the cooking and serving of meat foods and quite another for the cooking and serving of milk foods, and that to interchange one of these with the other is to render it incapable of further use in the Orthodox Jewish household. Nor can she go to the corner grocery and butcher shop to buy for her patient her chicken or her cut of steak, but all the meat which

she serves must be duly slaughtered by the so-called "Schochet" or official religious slaughterer of animals, and this meat having been obtained, it must go through a further process of so-called "koshering" which means that it must be successively soaked in water and embedded in salt for a definite period before it is religiously allowable, this being the rabbinical interpretation of the Biblical law, that the blood of the animal shall not be eaten.

To those who are strange to these customs they must seem very ridiculous indeed, and they are not to be blamed overmuch if at first they have little sympathy or indulgence for those who, at the risk of delaying their convalescence or even preventing their ultimate recovery, insist upon refusing dainty foods, because they are not ritually allowable, while they are willing to partake of other foods, often without nutritive value, which the physician absolutely prohibits. But I am sure their sympathies will be deepened and they will come to indulge the whims of these people somewhat if they can but realize how much a part of their lives are these things, and how they would rather face death itself than turn their back upon these traditions which, through a lifetime, they have regarded as binding upon them. Of course, we know that in emphasizing the letter of the law, they are sacrificing its spirit; of course we know that all this is very foolish, but at the same time if we wish to exert the best possible influence over the patient, we must put ourselves into such sympathy with him as will allow us to put ourselves in his place for the time being, and to enter into his mental attitude.

Dealing with the second division of the ceremonials under discussion, we come to the prayer and ritualistic forms of the Orthodox Jew. It is a striking fact that the Orthodox Jew seldom misses an opportunity to pray, and endless would be the list of occasions that might be cited for which he has some particular benediction. From sunrise unto sunset he could be busy at this service if he chose, praying before he washes his hands in the morning and again before he breaks bread, saying one sort of prayer over one kind of food and another over some other kind of food, breathing one petition if the food he eats happens to be the first of its kind of which he has partaken during that season, saying a prayer if he is about to start upon a journey, one sort of prayer if he goes by land and another if he goes by sea, and so on through the whole day's routine until at night he

closes his eyes with yet another prayer upon Now this constant attention to religious observances, if on the one hand it has a tendency to sanctify the secular, on the other serves to the neglect of other duties which to many of us seem quite as important, and it is only as we understand again how essential a part of the Orthodox Jew's whole life these prayer forms are, that we can persuade ourselves to enter sympathetically into his lip observance that is frequently coincident with the neglect of other things that to us seem more urgently pressing. But on the other hand the very conjunction of the religious forms with the affairs of daily life may frequently be used by the wise nurse and physician as hygienic agencies. Thus, for instance, the so-called ritualistic bath which is rigidly observed by the Orthodox Jewess, may be used as a means of persuading her that a greater frequency of bathing, both for herself and her children, will be a fulfillment of religious customs. In other words, what we need to do in dealing with people whose customs are strange to us, is not to belittle those customs, nor to lose our patience with those who practice them, but rather to use them as the means of bringing about the very conditions which, from the hygienic standpoint, we wish to establish. To call these customs foolish is to cut off every possibility of sympathy between patient and nurse. To indulge them is to establish the possibility of a more sympathetic understanding and consequently of a closer co-operation between them.

The home ceremonials of Orthodox Judaism, though they have elements that are somewhat strange to those who see them for the first time, are not without their elements of great beauty, and they too may be used as so many levers with which to lift the patient, ignorant of the laws of sanitary living, into a knowledge and appreciation thereof. Thus, for instance, the ceremonials in the Jewish home incident to the ushering in of the Sabbath may effectively be used by the clear-visioned and tactful nurse. Commenting upon the beauty and the inspiration of the white cloth and the lighted candles that are invariably a part of these ceremonies, she may persuade the mother that this spirit of cleanliness and of order and of cheer might be made a part of the household, not one night in the week, but every night, and thus all unconsciously the wife and mother might be made to work a very revolution within her home that would be all for good. Other similar ceremonies which the nurse sees practiced she might similarly use for the upbuilding of the home.

Two occasions in the Orthodox Jewish home present some peculiar problems to the nurse. One is the occasion of child birth, particularly if the child be a boy, and the other is the case of death. With the former we need not here deal except to explain, as every good nurse already knows, that the period for the religious dedication of the male child, through the ceremony of circumcision, is a time of tremendous nervous strain to the mother and that at that time the utmost tact and diplomacy is necessary on the nurse's part to calm the anxiety of Nor is this relieved in the the mother. homes where customarily the ceremony is accompanied by a feast given to friends and relatives, often accompanied by considerable noise and confusion, which just at this time should be absent. So it is that the tact of the nurse is put to one of its severest tests.

In the case of death and burial of the Orthodox Jew, again the nurse must be extremely politic, for around death hover so many superstitions that when bereavement of this sort falls upon him he is, as a rule, very difficult to deal with. Often the nurse who has been uniformly kind and considerate to the patient, will be frowned upon the moment that patient has passed away, and she who, with the utmost tenderness, cared for the sufferer, will be almost ruthlessly driven away from touching the dead. case of this kind the nurse, understanding the peculiar conditions that surround the Orthodox beliefs in regard to death, will take no offense but content herself with giving kindly advice and such help as she can to the characteristicallyemotional household; she will feel that the refusal of those bereaved to permit her to participate in the last offices to their dead is not a reflection upon her, nor yet upon their affection for her, but that it is born simply of a narrow superstition, deeply embedded in them, that none but their own co-religionists must touch the body of one whose spirit has flown to the great beyond.

The essential point that I desire to emphasize is that the work of the nurse among the class of people with whom we are dealing will be not only more efficient, but also more satisfactory to herself if, through a knowledge of the conditions out of which these people have come to be what they

are, she succeeds in putting herself for the time being in their place and thus establishes between them and herself a bond of sympathetic understanding.

Perhaps I should give you one further thought before concluding. Frequently it is felt by the nurse who goes into the Orthodox home in the poverty-stricken ghetto districts of the great city, that her task is almost hopeless because of the filth that so often abounds there, and in her mind somehow she comes to associate that filth with the fact that these people are Jews. Naturally such an association of ideas tends to a breaking down of sympathy. And how unjust it is! If there is one people on the face of the earth whose religious laws insist upon cleanliness in regard to the physical body, in regard to the home environment and in regard to the food which one eats, it is the Jew. Indeed, the very word "Kosher" which is the name given to permitted food, is by some translated as "clean," though a scientific knowledge of the Hebrew would not quite uphold that meaning. But this fact stands out, where these people are steeped in mire and in filth, it is due not at all to their religious condition, but it is the result of their poverty and of the social conditions which compel them to live in their miserable hovels, overcrowded and cramped together in a fashion that would ill befit even the dumb brutes, to whom oftentimes we give better care than to some poor human beings. It it well for us who are fortunately placed, who have our large, well-lighted, well-ventilated rooms, homes with abundant bathing and sleeping facilities, to preach to these poor creatures about keeping their windows open, about bathing regularly and what not, but who shall tell whether we would be more docile than they in these matters were their positions and ours to be reversed?

I am pleading for a greater sympathy for the unfortunate members of our community who frequently understand us as little as we understand them. Let it be our part, as helpers of humanity, and certainly of all the professions none so consecrates itself to human helpfulness as the profession of nursing, to do what we may to enter into the moral and spiritual life of those whose language and whose customs are strange to us, but who, beyond their outward differences, are, after all, blood of our blood, flesh of our flesh and spirit of our spirit.

A PLEA FOR MORE NURSES AT A SMALLER WAGE.

By Dr. Vertner Kenerson, Buffalo, N. Y.

LEST any one may think this is simply a tirade against the graduate nurse, I feel that I must preface the remarks that follow by the statement that it is simply a plea for more nurses with a suggestion as to how they may be secured; which, in a nutshell, is that nurses be received a little more mature, be trained a shorter time, that their training be of a nature more nearly approaching the conditions they meet outside, and that they should in view of the shorter term required be willing to work for a smaller wage at least for the first two years

That is the message, and to show that the suggestion is possible and practical, I give as an illustration my own private hospital where the matter has been successfully carried out for the last six years, where a very desirable class of nurses are trained, and who have without exception been very successful, busy all the time and able to satisfy the doctors for whom they have worked. What is more important, they have almost without exception been liked, respected and appreciated in the families in which they have nursed.

If this suggestion is accepted, I am sure that the constant shortage of nurses to keep the classes running at the large hospitals will be met, and the market will not be constantly "short."

But this does not include a recommendation that these shorter term nurses shall be called anything but nurses, or that any designation suggested by the present aristocracy of nurses shall label these women as assistants or practical nurses, or maids, or scrub-women. They are simply nurses and if they are of the same stamp as my nurses they will soon make a permanent place for themselves.

In the Fall of 1912 a bill was introduced in Albany creating a special Board of Graduate Nurses, who should be the final Board for the licensing of Graduate Nurses.

Nursing in Buffalo since I came here fifteen years ago has gradually become worse instead of better. Not because the nurses are poor, but because of the difficulty in handling a nurse in a private family.

The nurses have received so much training and they are so impressed with their own importance that they have grown out of the real sphere for which they have

been educated. In some way it has become impressed on them that their usefulness depends upon just how much disturbance they can cause in the regular running of the family. They object to doing absolutely everything that does not actually come in the line of personal service to the patient. Even when the sickness is of such trivial nature that the nurse is useful more as a companion than as an actual necessity for the patient, yet she refuses even to care for the bath room where she has taken all sorts of litter, including bedpans, douche bags, enema tubes; yet she wants to summon the maid from the kitchen to clean up these things after her.

Twice in the last year when the only persons in the house to be fed were a convalescent patient and the nurse herself, I have had "graduate nurses" refuse to stay on the case because there was no one in the house to prepare their meals. In another instance where a man of moderate means was trying to have his wife receive the very best of attention during her second confinement because of some neglect of the wife's own mother at the first confinement, the nurse refused to stay on the case for the reason that there was no one in the house to prepare the simple meals that the convalescent mother required, and that the nurse herself exacted. In this case also the nurse would not clear up the bath room after herself and her patient, or get the general laundry ready for the steam laundry or rinse out the baby's napkins for the little one.

I do not believe that any member of the medical profession appreciates what a good nurse is more than I do, but anyone that has had as much experience with them as I have had certainly must have reached the limit of his endurance under the assumed superiority of the graduates of some of our hospitals.

I realize that these young women have some grounds for wanting to have a close "Union Shop" because they have served a long apprenticeship. It seems to me that perhaps they have been asked to serve too long, if they were of the right timber when they began their term, and that if the term were shorter and more practical, nurses would be more useful and more plenty.

Practically no nurse can have had suffi-

cient experience so that she will have seen and had dealings with each and every surgical and medical disease that she may be called upon to care for in her outside practice.

Further, the nurses are too young when they enter these training schools, and they enter more because they want the experience for home uses or because they have an idea that it is a good way to come in contact with eligible young men, who may make desirable husbands for them bye and bye.

Please believe me that I do not say this in the spirit of levity or sarcasm, but want to bring forward another phase of this nursing question and go on record as being opposed to the "Seely Bill" in the form in which it was introduced last Winter, or in any other form that gives this grade of graduates a strangle hold on the best class

of nursing.

For the last six years I have maintained and managed for my own private cases and for the cases of my immediate friends a "Cottage Hospital" at 115 Park Street, this city. This is simply a private house well constructed of brick and furnished plainly and in hospital fashion inside, with a great abundance of clean linen which includes sheets, pillow-slips, towels and bed room accessories. Here I have trained about twenty nurses and have insisted from the first that I preferred women from outside, who had not been in any of the large hospitals, but who were naturally or by training good cooks and good housekeepers, and who were preferably over thirty years of age, and who wanted to really make a business of this work after they were through with me. I have explained to them before they came to me that they would not be able to see everything in my hospital, but that I would give them a thorough preparation in the essentials of nursing and would make no attempt to see that they had experience with each and every kind of sickness. I furthermore have explained to them before they came that they would not be supplied with an extra maid to curl their hair and manicure their nails, or to care for the rooms in which the patient was to be kept. I have encouraged them to be as careful as possible about making work for themselves but have told them that if they did spill a bedpan, or drop a douche bag, or allow a patient to vomit on the floor, it was their task to clean those matters up

and not to stand about and look bored hoping that someone else would come in and clean up the disagreeable mess for them. I have seen that they have all had careful instruction as to what was a proper diet for medical and surgical patients, and they have all had instruction how to prepare dainty dishes and have been supplied with the necessary things to make an appetizing meal for sick patients. have been told how, and compelled to keep careful notes of every case that has been under their care. They have not been allowed to shirk any responsibility for "not knowing" but have been compelled to know all the things they should for the bodily comfort of their patient. When the house has been light they have had plenty of time off, but have not started in with preconceived ideas about having two hours off every afternoon whether the patient suffered or not, or whether the doctors were put to great inconvenience. When the house has been full I have explained to them that this was not merely a "Roman Holiday" or a "Basket Picnic," but that they must take the work as they found it, and if the work was steep they must be prepared if they were going to follow this profession to make personal sacrifices, as the work demanded it, and take their leisure when work was light. I have not had a day force and a night force, because as you all know very well, the ordinary case, if a nurse is not simply trying to make work for her chum, does not require a nurse for both night and day. The nurse who has the right spirit will for a night or two after the operation put on her bath robe and lie down in the room with the patient, answering such calls as are necessary during the time the patient is recovering from an anesthetic. After the first night, or at most after the first three nights the nurse can go to her own room, get a reasonable amount of sleep and thus get into a proper state of appreciation of the needs of a private case outside, instead of getting exaggerated notions of her own importance and making unnecessary demands on the head of the house, who is already suffering from an acute attack of sickness and necessary charges for sick room delicacies as well as fear for what the doctor's bill may be.

I have told the nurses that if they would stay with me a year and a half I would arrange matters so that, while they would not know everything, they would certainly know the essentials, and that then if they would register with a good nursing bureau, they would certainly have plenty of work to do and could get their additional experience outside; but even after they had served a year and a half with me and then a year and a half outside, they would still have something to learn. Every nurse that I have sent off has been busy from the very first of her starting in. I have advised them to work for fifteen dollars a week for the first year and a half, which they have done. While I presume the standards of other men may not have been always the same as mine, I am sure that these women have been very useful, have not claimed to know everything, have known the essentials, known how to give hypodermics, enemas-high and low, baths, massage, rubs—alcholic and cocoa butter. They have been willing to get up simple meals and to care for the patients from top to toe and not to be too critical about the rest of the household. They have known what things were good to eat and how to prepare them. Whether my standards have been the same as other men's, I do know this, that when I have wanted one of my own nurses outside and have asked the nurse's registry I have been told repeatedly that I need not ask for one of my own girls because they were much in demand and seldom was one of them in more than two hours after she reported. In a number of instances the doctors would take one of my nurses when they would refuse a suggestion that they take a nurse from some other school. I know that this system of demanding older girls and a shorter length of service and the lower wage at least for the first two years after they leave me does not coincide with the recommendations of the committees in charge of the training schools, but I leave it to those who have had cases in my hospital if my nurses are not satisfactory, and if you do not prefer them as graduates, especially at the reduced rates, to the nurses of other hospitals.

It does seem that perhaps it is asking too much for young women to enter a training school and serve three years, unless they do receive a twenty dollar wage when they get out. But these nurses will have a good demand for their work all of the time. What I maintain is, that there is a good field for a class of nurses that do not serve so long an apprenticeship and can therefore afford, at least for the first

two years they are out, to work in families where it is a hardship for the head of the family to pay twenty dollars a week. One other phase of this thing is that the training schools that require three or four years' service, are not turning out nurses fast enough to supply the demand for them.

A further side light on this class of work is that the regular graduate is not enough impressed with the good it does the patient—and which is therefore a part of the treatment of the patient—to have the nurse come into the household and help the machinery to run smoothly, instead of coming in to "regulate" the family at the critical time when some member is seriously ill. No one can possibly appreciate a good nurse more than I do, but I am learning more and more to appreciate nurses who have had my own training, especially in the practical line of caring for the patient and doing absolutely everything, including the care of the rooms and the bath rooms, that the nurse is so apt to leave untidy. Again there are nurses who, as soon as they are given any leeway, will get arrogant and, after a short time, whether they have been trained in my practical way, or in the long four year course, will quarrel with any family, just on account of their own disposition; these will have to learn as the world learns, that if they want to keep the good will of the doctors and their patients, they must fit in. I do not mean to say that the nurses from my house are perfect,—they are far from it,—but I do say that they are practical women who can afford to work for the first two years they are outside for fifteen dollars a week and they give such good satisfaction that they are in demand and are preferred, by a number of doctors, to the four year graduates.

Furthermore, with the class of patients they have in the wards of the large hospitals, it is quite out of the question to give the nurses any instruction in regard to the care of genito-urinary cases, but at my hospital the nurses have been taught and are usually able to care for uncomplicated senile bladder cases and young men who have retention following typhoid or surgical operations. This sort of instruction is quite out of the question unless the cases are gentlemen, so that proper instruction can be given without exposing the nurses to a possible insult as soon as the doctors are out of the way.

One other matter in regard to confine-

ment cases makes the sort of training given at my house much more desirable than it could be in other places, because it is so much nearer to the conditions actually found at home,—it is the rule at my house with my own confinement cases and with those of other men who have paid me the compliment to use the house for such cases. that the room of the patient should be occupied by the patient and by the little stranger, that it should be kept properly aired, that the mother should learn to care for her own baby at least two days before she leaves the house, that the nurse, if the baby is restless at all, should sleep on the couch beside the mother so as to be within instant call of either patient. These are the conditions that are usually found at home, not four or five babies in one room at a distance from the mother, but one baby close by, so that the mother will from the very first learn what things are necessary to keep her baby in good humor, so that it will sleep through the night; so that she will have plenty of the right kind of milk and know from the very first, that nothing is to be given to the baby "so it will sleep"; that she is to "watch her step" so that she will not eat the wrong things herself and thus give the baby the belly ache at night and cause her to be wakeful.

Here too, is another point for the training of the nurses. They are held responsible by the feeling that their every act is under the eye of the mother and that they must manœuver so that the baby will take its nourishment regularly through the day and so that it will sleep through the night, usually wakening only once for food, never more than twice. This is as the conditions actually arise at home and invariably, with only the limited training that my nurses get in my hospital, they have been very successful with this work outside.

CORRESPONDENCE.

In communicating with THE GAZETTE always send your name and address. They will not be printed without your consent. We have but one place for anonymous communications, viz., the waste basket.

HOSPITAL GRADUATE PROTESTS.

Dear Editor:

In September issue of THE GAZETTE, is a letter from a nurse who signs,—"One Who Loves The Work."

Now will said correspondent please tell us the mames and addresses of the hospitals which employed her to do general nursing therein? We would like to have this list printed in THE GAZETTE.

It seems "passing strange" that hospitals should employ an attendant or correspondence-course nurse, and pay her the same wages as they paid to hospital graduates

to hospital graduates.

This would be a good subject for The American
Hospital Association to investigate.

AND,—if said correspondent is "constantly seeing" such criminally unskilful and negligent acts as she ascribes to a "Graduate and Post-Graduate Nurse" in a certain hospital, why it is time such hospitals and their methods were given publicity. Publicity is a cure for many evils.

I beg leave to differ with the correspondent in the statement that it is the careless trained nurses who wish to drive the untrained or correspondence-course nurses from the field. Not so at all. In the first place it is a self-evident fact that we trained nurses merely wish to regulate the work of the untrained.

We do not believe that any woman can become thoroughly trained by any short-cut method as by

correspondence-school courses. No amount of experience in private nursing (no matter how closely one follows the doctor's orders) can ever compare with, or equal the training and clinical experiences gained in a well-managed hospital.

'Tis true that some hospital graduates are unworthy of the training bestowed upon them; and both lazy and negligent when not working under supervision. There are unworthy persons in all professions; but that doesn't make the untrained nurse any more competent or well-fitted to undertake critical cases. She has not attained the knowledge necessary to make it safe for her to undertake the care of persons critically sick; and if she could be humble enough to realize this, it would be better for suffering humanity.

Advancement is the watchword of the vast army of well-trained nurses in our country. We do not know enough already; we wish to attain more knowledge and better methods.

To the untrained or domestic nurse with like aspirations I give the right hand of fellowship in the work; and will try to teach her what I know. For the nurse who thinks she is all-sufficient, no matter how little training or fitness she has for nursing,—I have nothing but pity and disgust.

Most sincerely,

HOSPITAL GRADUATE.

WHY NOT "OFFICIAL"?

EDITOR DIETETIC AND HYGIENIC GAZETTE:

Dear Sir: In regard to Questions and Answers published in each GAZETTE, will you kindly tell me what you mean by "The following Answers are not official, and they are prepared for the editor? Are the examinations of each training school in the State prepared by one official board? Will

you please give me the address of the State officials having charge of examinations of Ohio?

And oblige,

A. R.

The answers to examination questions in each number of The Gazette are prepared for our own use, and as they are not endorsed by the Board that prepares the questions we consider it only fair to announce that they are not "official." If any criticisms of these answers should arise it should be understood that we are alone responsible.

As a rule each training school has its own examinations for graduation. The State Board holds examinations for Registration.

Ohio does not have State registration.

MAYBE IT HAD A PULLMAN CAR-BUNCLE.

SIR: The train was just crawling along. My gemenfren was growing impatient. "I wonder what's the matter with this old engine?" he said. And I piped up trained-nursedly, "Judging from the way it's been puffing, I should say it had engina pectoris."—ETHEL in N. Y. Evening Mail.

Ethel is all right. Every nurse knows that the trouble was not pullmanary. It was cardiac.

HOW HOOKWORM DISEASE IS CAUGHT.

THE source of every case of hookworm disease is eggs of the parasite in the feces of infected people.

Young worms hatch from these and after four or five days become encysted and in-

fectious.

These can gain entrance to the body through the mouth, on dirty hands, in food and water, or through the skin in any way in which the infected material comes in contact with it, chiefly as a result of going barefoot; possibly also infection through wet shoes.

The fact that one or many attacks of ground itch is a part of the life history of almost every boy living in an infected locality, whereas those from noninfected localities do not know what the disease is;

that experimental hookworm infection through the skin produces lesions identically like ground itch, and the further fact that in infected localities the skin is almost daily exposed to soil and water polluted with human excreta, whereas drinking water and food are far less exposed, all indicate that skin infection is the practical and almost the only one that actually occurs.

The worms penetrate the skin chiefly through the hair follicles and sweat pores, enter the blood stream, pass through the right heart to the lungs, into the bronchi, thence to the mouth and now are swallowed, pass through the stomach to the small intestine, where they attach themselves to the mucous membrance and develop to adult life. — Monthly Bulletin, Indiana State Board of Health.

Questions and Answers.

The following answers are not "official." They are prepared for the editor.

University of the State of New York 20th Nurses Examination.

ANATOMY AND PHYSIOLOGY

Tuesday, June 24, 1913—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. When the hand lies with the palm upward, on which side of the forearm is

the ulna?

Ans. The median side, or inside.

2. What are phalanges or digits?

Ans. The bones of the fingers and toes.

3. What is an excretion?

Ans. A liquid or semi-liquid product discharged from a glandular organ and of no further use to the body.

4. What is the function of an opsonin? Ans. To make bacteria more susceptible to the action of phagocytes.

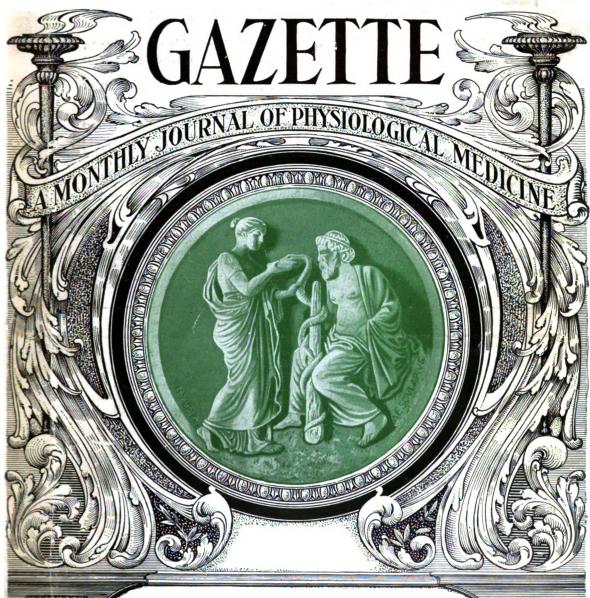
5. What two forms of energy evolved in the process of oxidation?

Ans. Heat and work.

Digitized by Google

THE

DIETETICANDHYGIENIC



PUBLICATION OFFICES

87 Nassau St.

New York

\$1.00 Per Annum. 15c. Per Copy.

Entered as Second-Class Matter at the New York Post Office.

CONTRACTS ON PACES

The best antiseptic for purposes of personal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teeth.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY LOCUST AND TWENTY-FIRST STREETS = = ST. LOUIS, MO.

AC A

VAGINAL DOUCHE CHINOSOL

(Accepted by the Council on Pharm. and Chem., A. M. A.)

MORE THAN SUPPLANTS BICHLORIDE BECAUSE

CHINOSOL

IS A MORE POWERFUL ANTISEPTIC

IS POSITIVELY NON TOXIC

IS ABSOLUTELY NON IRRITATING

DOES NO DAMAGE TO MEMBRANES

If mistaken for a "headache tablet", no tragedy can result.

CHINOSOL CO.
PARMELE PHARMACAL CO.
54 SOUTH ST., N.Y.

Digitized by Google

THE

DIETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A.M., M.D.

Vol. XXX.

FEBRUARY, 1914

No. II

EDITORIALS.

PNEUMONIA IS CATCHING.

For generations doctors sensed that pneumonia is a catching, that is, a germ disease, because they found it present pretty regularly in certain houses, in soldiers' barracks, in jails and in schools; they easily traced direct in fection in hospital wards; and they recognized epidemics of pneumonia, as of measles or scarlet fever.

But not until recent years was the germ of pneumonia (doctors call it the "pneumococcus") discovered. In this, as in all germ diseases, two kinds of causes have to be taken into account: first, the presence of the germ which is peculiar to the disease and is its specific cause; and then the predisposition, which weakens the body and makes it the right kind of soil for the germ to thrive in.

You will understand this better by taking the example of a family of half a dozen people. One or two among them will come down with pneumonia, whilst the others will escape. But why don't they all suffer, since in the family relation they must all have been about equally subject to the germinal attack?

The reason is that the bodies of those who have come down were predisposed—their resisting power to the germ of the disease was diminished. But in the bodies of those who escaped the organs were sufficiently healthy to triumph over the infection; and those fortunate members of the family had in their blood agencies fight-

ing the pneumococcus and rendering them harmless, and even consuming and destroying them.

These predispositions loom up very large indeed in the doctor's practice; it is a great deal of his duty to find them out and rectify them, if this is possible to be done. The sad thing, however, is that in the dreadful stress of modern life it is impossible always to avoid these predispositions. What are some of them, with especial reference to pneumonia?

Men have a greater tendency to pneumonia than women, because of the greater hardships the family breadwinner has to endure. In the changeable and unsettled months, such as December and March, there is much pneumonia; such months are windy, and dusty, too, and that has a great deal to do with the spread of the pneumonia germs. Cold and wet, especially as to the feet, predispose by lowering the bodily resistance. Then of a cold day a man will go into a stuffy saloon to get himself a hot whiskey punch, and will go right out into the cold again. This will make him sweat and have the effect to open the pores of his skin to the cold; so comes the deadly chill that starts an attack of pneumonia.

But cold itself is not responsible for pneumonia; during the continuous cold of January and February there is not so much of this disease as in the changeable December or March. Arctic explorers never have

pneumonia—anyway, not in the Arctics—because the germ does not exist in that pure air; but when they get back to civilization, where the germ abounds, they are just as likely as anybody to succumb.

Fatigue very decidedly predisposes the body to pneumonia; men who must work hard through long hours and in inclement weather are very apt to come down with it. Unhealthy conditions of the upper air passages—catarrhs—tend to "lung fever." There are chronic diseases of the heart, the liver, the kidneys and the stomach to which pneumonia is a "terminal infection"; that is, they die of pneumonia, to which those other diseases have predisposed them.

An injury to the chest wall may predispose. Alcoholism is at fault in a sad number of cases; and an alcoholic pneumonia is pretty well-nigh hopeless. There is more pneumonia in the cities than in the country for obvious reasons, but especially because the germ has a better chance to thrive in the city; besides, city people are more irregular in their living and they are overcrowded in ill-ventilated tenements.

Well, then, how are we going to prevent pneumonia? In the first place we have to remove the predispositions. That is an easy thing to write down, but a mighty hard thing to do. In this workaday world when the struggle for existence is so intense, it is impossible to remove all the factors that weaken the body and lay it open to the attacks of germs. As for the germ itself, we must act pretty much as we should against the germ of consumption. The sputum is disinfected; those who nurse pneumonia cases must keep their mouths and throats very clean by means of tooth brushes and gargles; they must wash their hands very often and then bathe them in disinfecting solutions. After the patient's recovery or removal his house is disinfected throughout. Those who need not be with pneumonia patients had best not visit them, though, of course, there is no occasion for fright, as if they had the plague. However, people worn out or otherwise susceptible to infection should not unnecessarily expose themselves to pneumococcus infection.

MIND AND MATTER.

"What's mind? No matter: What's matter? Never mind." This is Punch's system of philosophy; and it has at least the merit of being incontrovertible—a merit almost absolutely unique in the history of thought.

The relationship of the mind to the body has been no doubt as old a theme for speculation as the nature of mind itself. In fact, until we can discover the nature of mind, and can tell what matter is,—until we have explained these ultimates,—we cannot positively solve the puzzle of mind and matter. It is evident to the man in the street that the mind impresses itself on the body; and the modern psychologist has shown how the body reacts upon the mind. However, in philosophy, there have been from time immemorial two camps—

the metaphysical and the materialistic; and those in these camps have in ages past visited dreadful sufferings upon one another and have fought most bloody wars. Then between these two camps there are those who have stood for an interaction, a reciprocity, a parallelism of mind and body.

Up to our era the metaphysical viewpoint has generally prevailed. The mind has been everything, as beautifully expressed by Edmund Spencer:

"For of the soul the body form doth take, For soul is form, and doth the body make."

And by Schopenhauer: "The spirit has all matter to choose from." And yet the metaphysician's view is by no means invulnerable. How is it, asks the material-

ist, when the body is for a few minutes deprived of oxygen, when a lethal dose of poison vitiates the life sustaining blood, when a blow stills forever the body's conscious processes; what then has become of your "all-potent mind?" The body remains with all its elements, organs, tissues, processes as before; but there is no longer mind to direct the body's destinies. It has been destroyed by the agencies which have been inimical to the body's functions. Has not, then, this mind been merely one of those destroyed functions, like digestion, bile formation and heart action

And so the materialist holds that life is essentially and merely a psycho-chemical process; that such terms as mind, soul, spirit and the like are only ideas conditioned upon material entities and produced by the brain and nervous system, the physical organs by which mind is evolved.

But here again any philosopher can see that the materialist has bitten off more than He leaves the scientific he can chew. thinker (what is philosophy but the sum of the sciences, or the "knowing" of the cosmos) utterly unsatisfied. The materialist tells us that the mind in its diverse aspects, (reason, intellect, will, emotion), is but the resultant of purely materialistic conditions. The whole thing, he tells us, started in this way: The beginning of life, the sentient existence, was when the sun first shone on and vivified a morsel of primordial protoplasm, in consequence of which that morsel took on a sort of unicellular, ameboid existence. Thence has been evolved, step by step, aeon after aeon, through various progressively complex stages, the human organism, the most highly "evolved" that we know of; and by and by there is going to be a superman, who will go us one better-and all out of that serrified morsel of protoplasm, and by processes purely psycho-chemical.

The trouble here is that the explanation how that bit of protoplasm became sentient is not complete. Like Ko-Ko's narrative, it is bald and unconvincing and lacks verisimilitude. How did the protoplasm get there? one is entitled to ask; and how did the sun come to shine? How did the sun get there?

The materialist may answer that millions of years ago there existed atoms which under the pressure of gravitation became concentrated into nebulæ, whence were evolved suns, whence in turn planets were thrown

off, upon which certain accumulations of atoms (which we now call matter) took the molecular form of protoplasm, upon which the sun acted. Very well, then; but how did those primal atoms which became nebulæ come into existence?

Then the materialist may answer that these primal atoms were evolved out of space-filling ether. To this one may again respond, with tiresome persistence, and like that insatiable little boy whose curiosity is ungovernable, then how did ether get there? And so on, just as far back as the materialist wants to go.

In short, the real riddle of the universe is as inscrutable to the materialist as it is to any one else; the latter has not solved for us the real mystery of mind.

The materialistic viewpoint was admirably set forth by Professor Shafer in his address on The Origin of Life; in controversion of this came Dr. J. S. Haldane's superb summing up in his address on "Mind and Body": The relation of mind to body is not that psychical phenomena are mere accompaniments of physical processes in the body, nor that there is an interaction of body and an incorporeal mind (parallelism or epiphenomenonism); but that body is conscious personality looked at incompletely or abstractly. In other words, conscious personality is the truth of the body and its environment; and the physical causes, which seem at first sight to determine the mind, are only superficial appearances. merely another way of saying that however little we understand it in detail, our world is a spiritual world. We are not thereby committed to the absurd position that the personality of the universe is a man's own individual personality, coming into existence at a certain date and disappearing again at a certain other date. Just as biological facts have taught us that the life of each individual cell or organism is only part of a wider life, so have ethical and religious facts shown that the individual personality in its full realization is the expression of divine personality, which alone can be the ultimate truth of all existence. The individual personality, including his ideas of the world and his ideals of conduct. is evidently a product of his time, the expression of a wider personal life, which he only realizes in living it and living it whole, confident in his participation of it and ready to give up his mere individual interests, or even his life itself, should his duty lead him to do so.

CREMATION.

PRICE COLLIER, who died on the Island of Funen, desired his body to be cremated and this was done in Copenhagen. Cremation of the bodies of those who have died is preferable to burial. Emerson, in the diary of his European trip, noted that the French have engraven on the tombstones of their dead, "Here Lies-"; our American custom, "Here Lies the Body of-," is better, being more consonant with the ever impressive "there is a natural body and there is a spiritual body," in the service for the dead. In considering the comparative merits of cremation and burial the beautiful Pauline sentiment just quoted should go far to remove pious prejudice to incinera-And is not, indeed, material life, from the cradle to the grave, but a slow oxidation, a continuous process of cremation? There is still a vestige of the theological view that the material body should remain whole until the last trump, that it may not appear otherwise in the presence of its Maker. But it is inconceivable this could be so of any body that has not been more than several decades in the grave. Yorick's skull becomes hopelessly intermingled with the spine of an erstwhile neighbor, the thigh bone of another. The gruesome idea need be no further pursued. On the other hand the ashes of the dead could be perpetuated so long as any memory of the life representing it would endure; whilst the spiritual body may be conceived to remain whole perpetually. Will not then the reverent, or taking thought conclude the columbarium to be preferable to the grave? Cremation obtained among

many ancient peoples. Especially did the Greek poets find spiritual grandeur in the concept of the soul arising from the ashes of the dead (the natural body) into the empyrean, to dwell thenceforth with the stars. Cremation was indeed an honor denied the bodies of such as had been suicides, those who had been struck by lightning, and others deemed unworthy. Should religious objection to cremation be removed there would remain that of the facility it is assumed to afford murderers and other criminals for the concealment of their crimes. But adequate safeguards can beindeed, are—legally established. In England no one may be cremated until two independent medical certificates have been given. In the event of doubt ample provision is made for post-mortem examinations. Thus there can remain no other reason why cremation should be preferred to burial; whilst there are peculiar objections, besides those mentioned, to burial—a slow process, most repugnant to the imagination, and inspiring, as it certainly did under the asceticism of the Middle Ages, much occasionless horror of death. How dangerous burial is to the living, especially in large cities and where graveyards are contiguous to habitations, all health authorities are fully aware. If cremation should become customary-there are now many crematories in civilization—only the speculator in cemeteries need take umbrage: for there is big money in cemeteries; probably nothing better going with the added likelihood of being able to evade taxes. (This is not, of course, to reprehend many noble institutions.)

MEDICAL RESEARCH habitually strives to arrive at something beyond abstract truth. It seeks to promote public and private safety and happiness and the material welfare of society. Its devotees have in mind the discovery of means of remedying misery or warding off calamity; and they know that whatever contributes to health and longevity in any community or nation contributes to its industrial prosperity; so that they are justified in hoping for results from their

work which will promote human welfare.— C. W. Eliot.

THE HUMAN BEING is a part of the whole of nature and cannot be understood without it. What is wanted is a satisfactory general view of the process of the universe. Possessing this, we shall find the key in our hand which will open the most secret recesses of the art of medicine.—Gompera.

THE LUNGER IN THE SOUTHWEST.

THE National Association for the Study Prevention of Tuberculosis has strongly advised physicians against sending their patients ill of this disease to the southwestern part of our country, when they are indigent, or are in danger of becoming so, or are in the advanced stages of consumption. This is done today not nearly so much as formerly, nevertheless even now the practice is deplorably frequent. It is most unfair to burden the people of Colorado, New Mexico, Southern California and Western Texas (who have generally been most hospitable and most charitable in the premises) with a load that has thus far been greatly beyond their communal resources to meet. And the condition of "the lunger in the West," who has gone thence without sufficient means to last him through his cure, or who was incurable to begin with, is pitiable almost without precedent in the history of the sick.

The impression is erroneous that our Southwestern climate is essential to a cure; high altitude, dry air and sunshine are indeed salutary for most consumptives, but not so for all. True, many recoveries have been achieved in these regions, but also very many deaths have come to pass, as anyone may satisfy himself who observes a federal map showing the comparative tuberculosis mortality by States. Colorado is thus indicated to have a high consumption death rate, the sole reason being, of course, that many consumptives about to die under any terrestrial circumstances whatever,

have emigrated to that State. One sees here how often and how much the physician in the East has been at fault, his diagnosis of incipient or early tuberculosis turning out afterward to be one of moderately advanced or even far advanced consumption.

High altitude, dry air and constant sunshine are not essential to the cure of tuberculosis; any other climate in which life is lived outdoors, in which the febrile patient will rest, in which none will exercise violently, and where the patient will submit implicitly to discipline will be as salutary. At least as many cases, number for number, have been cured in the cold and cloudy Adirondacks, with their abundant rainfall, as in the Arizonian desert or the Californian paradise. The essential, we repeat, is obedience to the prescribed regimen, which obtains in a well-conducted sanatorium, where the patient is ever under wise and inexorable supervision, unable for the time being to break the rules upon the obeying of which his very existence depends. were well indeed if every tuberculosis patient could enjoy at least three months in such an institution in order to comprehend what such discipline means, how beneficent it is, and to acquire the cure habit. Unfortunately this is for not onetenth of the tuberculous; the rest must be treated in their homes and by their family physicians. And the latter ninety and more per cent will do well, and in many instances be cured or have their lesions arrested if they are obedient (how few, alas, are) and if their physicians be masterful.

WHO FIRST USED ETHER IN SURGERY?

Who was the first anesthetist—that is, who first used a drug for the relief of pain in a surgical operation? The priority has been supposed to lay with Dr. Morton, of Boston. But Horace Wells was nearly two years ahead of Morton in the use of ether. And just two years and eight months before Wells, in a small town in Georgia, Dr. Crawford Williamson Long, on March 30, 1842, removed without pain a tumor from the neck of James W. Venable, who was

during the operation under the blessed influence of ether.

Dr. Long repeated the feat in July of that same year, and again in September of the next year and again in January, 1845. He didn't realize how wonderful was his achievement and how it was destined to revolutionize surgery. And he made no report of his experience until 1849, when his account was called forth by a report of Morton's work. They put up a medallion

to Long in the University of Pennsylvania on March 30 last, the seventieth anniversary of his use of ether as an anesthetic.

It is a curious and a very encouraging thing to realize, that any great discovery is generally the outcome of the genius and the labor, not of one man alone, but of many. After all no one ever does things in vain. Something somehow comes of his industry; and it may be, in quite unexpected ways. After all, there are few of us the world could do without.

For example, Lister's great principle of asepsis, which is the cornerstone of modern surgery, was based on the attempt of Pasteur to find out why a certain fungus affected the two varieties of tartaric acid differently. That was the beginning of the germ theory, and the foundation of the whole modern treatment of disease by vaccines, serums and antitoxins. Another thing—ether stood on chemists' shelves three hundred years, while the agonies of injury and disease went on unalleviated. Humanity had to wait until a man of genius

and sympathy, such as Long was, should make the right application of it.

In remembering with gratitude Long, Wells and Morton, we must not forget Sir James Simpson, who at about the same time applied chloroform in Scotland for the relief of human pain. This merciful discovery had to meet a good deal of bigotry. For instance, when he was employing chloroform in childbirth, a clergyman declared his procedure a "decoy of Satan, apparently offering itself to bless women, but in the end destined to harden society and rob God of the deep earnest cries which arise in time of trouble for help." What cruelty under the guise of religion!

And while we are praising Long, we should record debts of gratitude to other great Southern physicians—McDowell, who did the first ovariotomy; another doctor from the South invented an ice-cooling machine, because he wanted to cool his fever patients; and who had not heard of Sims and Emmet, both Southerners, who developed gynecology in America?

THE TEMPLE: A POEM.

By RABINDRANATH TAGORE.

The Bengali Poet to whom was awarded the 1913 Nobel Prize for Literature.

With days of hard travail I raised a temple. It had no doors or windows, its walls were thickly built with massive stones.

I forgot all else, I shunned all the world, I gazed in rapt contemplation at the image I set upon the altar.

The night there was everlasting, lit by the lamps of perfumed oil.

The ceaseless smoke of incense wound my heart in its heavy coils.

Sleepless, I carved on the walls fantastic figures in mazy lines, bewildering — winged horses, flowers with human face, women with the curving limbs of a serpent.

No passage was left anywhere through which could enter the song of birds, the murmur of leaves, or the hum of the busy village.

The only sound that echoed in its dark dome was my own chanting of incantations.

My mind became keen and still like a pointed flame, my senses swooned in ecstasy.

I knew not how time passed till a thunderstone had struck the temple, and a pain stung me through my heart as it were a snake of fire.

Suddenly a gap yawned in the stony walls, the daylight streamed in, and voices came from the world.

The lamp became pale and ashamed.

The carvings on the walls, like chained dreams, looked meaningless in the light, and vainly tried to find a hiding place.

The closed walls opened in my temple.

I looked at the image on the altar.

I saw it smiling and alive with the living touch of God.

The captive night spread its wings and vanished.

(Published by The Macmillan Company.)

ORIGINAL ARTICLES.

THE PROCEEDINGS OF THE SECOND ANNUAL MEETING OF AMERI-CAN ASSOCIATION FOR PROMOTING HYGIENE AND PUBLIC BATHS IN BALTIMORE, MD.*

A CITY DEPARTMENT OF PUBLIC BATHS AND GYMNASIA.

BY WILLIAM H. HALE, PH.D., SUPERINTENDENT OF PUBLIC BATHS OF BROOKLYN, N. Y.

At a recent meeting of the directors of this association it was stated that the Public Bath house at Carmine Street, New York City, has activities conducted under three different controls—the public baths in the lower part of the building, controlled by the President of the Borough of Manhattan, the gymnasium above these, by the recreation commission, and the roof garden over all, by the department of education; and this condition appeared so anomalous that I was requested to prepare this paper on a City Department of Public Baths and Gymnasia.

The situation existing in my own city has brought this matter home to me. the time when the great congeries of municipal town and village governments was consolidated into the present City of New with complex а government wherein the Mayor exercises certain powers over the entire municipality, and the five Borough Presidents control, each in his own borough. such matters as the charter assigns to them, there was not then a free public bath in the entire city, except the floating baths, which were stationed along the river front in summer.

Thanks to our President, Dr. Simon Baruch, however, who had fought for the public rain-baths since 1890, one bath was already planned for the Borough of Manhattan. The new charter provided that the Borough Presidents should have charge of the public baths, but laid down no details of administration. The result was that they were placed in the bureaus of public build-

ings and offices in the several boroughs, a most illogical arrangement, since there is no obvious reason why this business, any more than any other, should be administered by this bureau. Of course, all the governmental business is done in public buildings.

Side by side in the two great boroughs of Manhattan and Brooklyn has grown up a great system of interior public baths, twelve in the former borough, seven in the latter, and one each in Queens and the Bronx, besides the great municipal bath for seashore bathing at Coney Island.

The inevitable result is lack of homogeneity in some important details. For instance, Brooklyn has always furnished soap and towels to bathers, charging 1 cent for soap and 1 cent for use of towel, 5 cents for bathtub, including soap and towel. Manhattan started with this system, but soon abandoned it, and now, near most of the Manhattan baths, may be seen signs of thrifty tradesmen who offer to supply soap and towel for 5 cents. Public appreciation of the convenience of our Brooklyn system is shown by the steady growth of cash receipts year by year, till in 1912 these amounted to \$21,655.10.

But notwithstanding the great excess of work devolving on our attendants by handling the soap and towels, and the resultant cash, the attendants in charge of the Manhattan baths receive higher pay, viz.: \$1,050 per year; while ours get only \$900, which naturally leads to discontent and a feeling that injustice is done.

A recreation commission has been appointed very recently. All the new bath

^{*} The publication of these Proceedings was begun in THE GAZETTE of December, 1913.

houses in Manhattan have been provided with gymnasia—but not one in Brooklyn; yet, as I have already stated, the gymnasia are under separate control. Why should this be? The great factors of public health—bathing and exercise—are now generally combined in our colleges and universities, and Christian and other voluntary associations. They seem naturally to go together and to supplement each other.

Swimming may well be considered the connecting link. It is usually considered to be the best kind of exercise.

A striking result of the lack of harmonious development of our bath system in New York is the great inequality in providing swimming pools in our two great boroughs. Manhattan has two, and is constructing four more in existing interior baths, besides planning another in the new bath to be built in West 28th Street; whereas Brooklyn has only one, and no present outlook for another.

In the twelve years which have elapsed since the opening of the first bath the City of New York has developed the largest system of shower baths in the world; and now has also the great seashore bath house at Coney Island, which, however, is really only a house for bathers to dress and undress in.

The enormous aqueduct from the Catskills will next year bring to the city such an ample water supply as to permit and encourage almost unlimited expansion of our bathing system; even as the great aqueducts to ancient Rome stimulated the building of the baths which were the wonder of the world.

Surely all these signs indicate that our municipal baths have become too important to remain longer as a mere vermiform appendix to the Bureau of Public Buildings and Offices, and are well entitled to be organized either as a separate department of the city government or as bureaus in the respective boroughs.

And this department or these bureaus should have a wider scope than bathing. The cleansing of the body should go hand in hand with its proper development and culture. Why shall we not profit by the experience of schools, and colleges, and Christian and other voluntary associations, and in our civic work combine the baths and the physical culture of the body by establishing baths and gymnasia in the same building and under the same control?

The awakening of public interest in the baths is world-wide, as shown by many signs, notably the holding at The Hague last summer of the First International Conference on Public and School Baths, and the organization last May at New York of the present Association, which already during a single year has grown to the proportions indicated by this large and enthusiastic meeting.

A notable sign of the times is seen in the remarkable policy which has within the past few weeks been adopted by a great firm of manufacturers, Messrs. Harrison Brothers & Co. of Philadelphia, manufacturers of paint, who have inaugurated the system of paying their employes fifteen cents for every bath which they take in the model baths provided for them, a policy which a press report stated would cost the firm more than \$52,000 a year if every employee bathed every day. This may be exaggerated, but the amount of cash payments would certainly be enormous, in addition to the cost of equipping and maintaining the baths.

Surely incidents like this should stimulate our best thought and endeavor to provide for the people the best facilities for bathing and physical culture that the state and the municipality can furnish.

It's all right to bear other people's burdens, but don't come home loaded every night.

"We are all of one mould, but some of us are mouldier than others."

[.] Begin at the bottom and you won't have so far to fall.

[&]quot;As a leaky hot water bottle in time of need, so is a fond woman who telleth thy secrets; her folly exceedeth her comfort."

THE AMERICAN PUBLIC BATH, ITS LOCATION, PLAN AND CONSTRUCTION.

By August P. Windolph, New York City, N. Y., of the Firm of Messrs. Werner and Windolph, Architects.

FROM the earliest records when the Public Bath was first introduced in this country (1850), and almost to the close of the last century, but little attention was given to the subject of bath sanitation. Our American municipalities were either indifferent, or at any rate did not deem it imperative to establish a system of Public Baths. A few isolated buildings of the river bath type, poor and crude imitations of European models, were in operation; also some primitive buildings equipped with shower baths.

To better appreciate the conditions at this time some statistics taken in New York and Philadelphia are interesting. In the former city ninety-six per cent. of the people of the tenement sections were entirely unprovided with bath facilities, and Philadelphia showed eighty-two per cent. unprovided for; in one section containing 255,000 people only 300 had proper bathing facilities. The cities of the second class and towns were but little better off.

England had long before this by legislative enactment made it mandatory to establish these buildings as an integral part of the modern social system. In the early nineties Dr. Simon Baruch, our worthy President, started a movement that may be described as a new social spirit, or civic Renaissance, introducing the rain or shower bath.

It is within the last decade that bath building has shown some systematic development. Each municipality heretofore approached and solved the problem after its own fashion, some following inapplicable foreign types, but generally, and with more unsatisfactory results, the direction of a board of local improvement.

The customary European practice of choosing a site of sufficient dimensions to furnish most of the bathing facilities on one floor is not desirable in this country,

where compactness and facility of operation are essentials, because of the fact that our public funds do not permit a large initial expenditure for the acquisition of the site. Here baths are usually located in tenement sections, where property is held at a high figure, and they must therefore be economically planned.

No public buildings offer so many difficulties in the matter of selection of site as the public bath. It obviously should be located in the most densely populated section, but such a location does not necessarily imply its success, for the character of the population may change, as well as the character of the buildings. Frequently tenement houses are replaced by commercial structures, or there may be an influx of some foreign element which refuses to patronize the institution, and thus handicapped the bath may prove a failure. On the other hand, some of the native-born population have an aversion to the public bath patronized by foreigners. One of the New York City baths is situated on the dividing line between colored and white populations, and the problem of keeping order and superintending the institution is for this reason a most difficult one. If this bath had been placed in the heart of the white or colored section its value to the community would have been greatly enhanced.

The site for the bath should be easily accessible and convenient to a public school; should not be too near a river, particularly if river bathing be available, and, if possible, should be located on a corner, to allow for exits and entrances on two streets, thus separating the sexes. These conditions must be carefully weighed in selecting a An important matter is the disposition of baths at proper distances from each other, and in the most populous sections it would seem desirable to locate them not more than half a mile apart. A series of small buildings equipped with showers grouped around a large central building,

equipped with a pool as well as showers, would be an effective arrangement. would differ from the English idea in that the minor establishments would be considerably smaller and the buildings more closely grouped. In solving this problem lack of co-operation is often the case, which is equally manifest in other matters of civic improvement in this country. This may be due, in a measure, to the complex character of our population, and to the size of a country as vast as ours, which is in a state of rapid development, but above all to the lack of systematic records and comprehensive statistical information on the subject of This last factor has been of great assistance to Germany in developing a system of baths properly proportioned to the needs of her people. Foreign cities of the first class are often equipped with small bath buildings, but in this country the size of the buildings indicates fairly accurately the size of the city. We have had the advantage of the experimenting on the part of foreign authorities and have profited by their mistakes, and while our bath system, even up to the present day, is in a very experimental and indeterminate shape, some of our individual buildings are, as regards sanitation and fittings, equal to the European models and are often superior in simplicity of plan and merit of construc-

It is well to bear in mind, however, that we have not the difficulties of providing facilities for various classes of bathers, and the elimination of steam, hot air and vapor baths has further simplified the problems. The elaborate entrance halls, staircase and rooms devoted to various purposes other than bathing generally found in the foreign bath play a comparatively small part in the municipal bath establishments in this country, the desire being to provide the largest proportion of units possible devoted solely to bath purposes.

For convenience we may classify public baths into two main groups: the Interior Baths, including those that are enclosed and which, as a rule, provide facilities for all-year bathing, and a second group, including Seashore and River Baths, those open to the air, which are used only during the summer months.

There are three distinct types of interior baths: those equipped with the showers; those equipped with the pool; and a type combining the other two.

The building equipped with the shower

has up to the present time been the most favored by our municipalities. Its many advantages of economy, practicability and simplicity have appealed to the authorities, and the majority of the cities of this country having public baths have at least one building of this type. The small city bath equipped with showers has been greatly favored by the German and other continental authorities. In the cities of the first class the capacity of these buildings rarely exceeds fifty unites; the larger buildings invariably combine other forms of baths with the showers. In this country some of our largest institutions are equipped solely with shower baths, with a capacity varying from seventy-five to two hundred units. are excellent shower baths in many of our cities, and in New York we have:

The John Jay Bath;
The Rivington Street Bath;
The West 41st Street Bath;
The East 11th Street Bath;
The Carmine Street Bath;
The East 54th Street Bath;
The Rutgers Place Bath;

And the Montgomery Street Bath at Newark, N. J.

The Rivington Street Bath is the only public bath in the city where the laundry has been introduced, which has not proved successful, and the allotted space has recently been changed and is now used for showers. On the other hand, in Baltimore, Buffalo, Cleveland and Boston those baths which are equipped with laundries have had fairly successful results.

The second type of the Interior Bath, in which the pool alone serves the bathing purposes of the institution, is but rarely used in this country. The only instance where this system has been adopted throughout a large city is in Philadelphia. The baths are not of a strictly modern type and are comparatively inexpensive build-The plan of the pool is modeled after the English type, with the dressing compartments directly off the pool runway; adjoining the waiting-room is a primitive form of a preliminary cleansing bath arranged in an alcove. There are a few other isolated examples of the pool bath type which are similar in general plan and arrangement to the Philadelphia baths and call for no special comment.

The third type, the combination of the pool and the shower bath, is rapidly grow-

ing in favor in this country, and will eventually displace the other two forms, except in those instances where it is desirable to provide baths of very small capacity. One of the earliest examples of this type in this country is the Municipal Bath at Brookline, Mass. The pool bath units, as compared to the showers, are proportionately much larger, the pool bath providing more than 80 per cent. of the capacity.

The West 60th Street Bath in the City of New York is still another variation of the third type. In this building the dressing-rooms are placed on the balcony in the plunge room, directly off the waiting-room level. This arrangement separates the dressing-rooms and runway from the pool runway below, and the bathers are under direct control at all times.

Staircases on either side lead from the balcony directly into the preliminary cleansing room below, which is separated from the plunge room by a guard rail and gate, at which the attendant stands and controls the bathers. This arrangement allows the undressing, preliminary cleansing and bathing to be supervised from any point of control in the plunge room. Special staircases in the waiting-rooms lead to the second-story shower halls, which have a capacity slightly less than that of the pool.

The arrangement of the cleansing room off the plunge should receive more attention, as the success of the pool bath in many ways depends upon it. Ease of supervision, with foot and shower baths, the arrangement of the toilets so as to be accessible for the bather on the way to the pool, are some of the prime factors that should be considered.

Some other examples of this type are the East 23rd Street Public Bath, New York City; the Cabot Street Bath, Boston, Mass., and the Orange Street Bath, Albany, N. Y.

The open-air baths of the second group form a valuable auxiliary to the interior or all-year baths; there are three types, the River, Seashore, and Park.

Although the River type was the earliest introduced in America, our municipalities have given, as a rule, but scant attention to this form of bathing, and the river bath of to-day shows but little improvement over early experiments.

The reconstruction of the river baths, arranging them so that the water is confined in a basin and filtered, is now being investigated and may be adopted. This is prob-

lematical, however. A better plan would be to construct the baths on recreation piers on the river fronts. These could then be planned as Interior Baths for use throughout the year.

Occasionally we find Shore Baths with bathing and dressing facilities entirely enclosed as in the interior type. This is true of the Sutro Baths near San Francisco, situated on the shores of the Pacific, and which consist of no less than six pools, entirely enclosed with glass.

Another example of the Seashore Bath with the dressing and shower facilities enclosed, but with the open sea bathing, is the State Bath at Revere, Mass.

In the Park Baths we find part of the facilities available during the winter months, and, as a rule, gymnasiums combined with them.

Boston has a few examples of this type and a few isolated ones are found in cities of the second and third class. It is in Chicago, however, that we find a complete system of Park Baths in operation, and, while strictly speaking, they are of the open-air type, they suggest the interior baths, because, in addition to their provisions for bathing, they have an enclosed gymnasium, as well as lecture and reading rooms, for use during the winter months. These baths are situated in the densely populated sections of the city, and their total yearly attendance is in excess of the interior baths.

Chicago has operated this system of park baths for only a few years, but has amply proved that they are, in conjunction with interior baths, a valuable asset for all large cities, tending to the elevation of both the moral and physical well-being of the community.

The ideal plan for the Public Bath Building for American cities is essentially a modern problem and must be solved to satisfy exacting and varying conditions. Ancient types offer valuable suggestions for the various forms of bathing and for arrangement of the plant; they are not adaptable as a whole for our purposes. The exterior of the bath should express the purposes of the building. Excess of ornamentation increases the initial cost, and a pretentious façade repels the poor and defeats the true purposes of the building. The problem is in many ways similar to that of the hospital; fundamentally it must be treated from the standpoint of sanitation, as the mission

of the bath is to elevate the standard of cleanliness and public health.

The plan above all must be simple in general arrangement, providing liberal openings for light and air, as the best results are not obtained by use of artificial light or forced ventilation. The work of the institution is greatly facilitated where the corridors are made direct and in easy communication with the entrance halls. Ease of supervision is an important factor. All parts of the building should be accessible, so that if any part of the equipment is damaged it may be quickly located and repaired.

To facilitate the circulation and to provide for the continuous movement of large crowds in the summer season the waiting rooms should be planned of ample capacity, but not to encroach on the bathing hall space. A fair ratio would be about 25 per cent. of the total ground floor plan, and in case the building has a second story of showers this proportion of waiting-room space should be slightly increased. It is customary to give to the men's waiting-room about two and a half times the space allotted to the women, this being the average relative attendance of the sexes.

The staircase should be arranged in the waiting-rooms so as to separate the lines of bathers, and should have easy runs and of ample width. The superintendent's office should be placed between the men's and women's waiting-rooms and should be accessible to every part of the building, either by speaking tubes or telephones.

In considering the form of bath to be used, what proportion of shower, tub and plunge units should be planned for in order to insure the best results, the problem often becomes very complex, and must be solved for the locality in which it is to be built.

The form of valve in use to-day in shower compartments does not control the water consumption, and as the valves are under the bather's own control they are frequently left open, causing considerable loss of water. Another objection is the difficulty of properly supervising a large number of bathers who crowd in the compartment and thus destroy its principal virtue, the isolated bath. The tub bath has been objected to from the standpoint of sanitation, as it is the most difficult of all fixtures to keep clean, and, owing to the space required and the great amount of water consumed, can no longer be seriously considered in bath equipment. The principal virtue of the shower bath is its sanitation.

Just what part the pool is a factor in the general public health would be difficult to determine, but the consensus of English opinion is that a pool properly constructed should be incorporated in every bathhouse. In Germany the Society for Public Baths recommends Pool Baths where funds are available. As to its economic value, the initial cost of the pool is less than any other form of bath; furthermore, the water consumption, being under absolute control of the superintendent, is much less than in other forms of bathing.

In this country a recent test in a Public Bath showed a ratio of three pool bathers to one shower bather; but what is more significant is the fact that on certain days, when the plunge bath was not in operation, the bath was practically without patrons.

There is little to say of the tub rooms and toilets. If the former are considered necessary they should be inconspicuously placed. The general practice of placing the toilets directly in the bathing halls in an interior position is not desirable, as it is far better to depend on outside ventilation.

The laundry is not as yet considered an integral part of the American Public Bath, but its real value will be eventually recognized. The working classes have an aversion to publicity in their domestic affairs and are reluctant to use a laundry; but, if it is properly planned, with ample light and air, its advantages and conveniences become so apparent that this feeling of distrust is soon overcome. If the problem demands the placing of the laundry in the basement, the workrooms should be high and the first floor be well elevated above the sidewalk. It would be well to keep the patrons of the laundry room from coming in contact with the bathers. exact disposition of the washing, drying and mangling machines depends entirely on the type of machines used, but in any case it is well not to crowd the machines and to allow liberal working space.

The machines, boiler-room and coal storage are generally placed under the waiting-rooms in our large municipal Bath Houses, in a place too restricted, poorly lighted and with little means of direct ventilation. The severe demands made upon this part of the building for apparatus and pipes require a liberal distribution of the entire

plant, and the necessary time and attention should be given to ensure, not only the accurate placing of the various apparatus, but the arrangement of the various lines of pipes and valves, as the ultimate success of the building depends upon this.

Ample room should be provided for the numerous lines of pipes, ducts, filters, etc.; also for the pumps and other apparatus required. A break in a too compact space makes immediate repairs impossible and often requires the taking down of a considerable part of the plant. A liberal factor of safety for overload should be provided, as the demands in certain seasons of the year are severe.

Many public baths are not equipped with attendants' rooms; a room for the use of the bath attendants should be arranged on every floor, with proper locker and toilet

accommodations.

Superintendent's living quarters is a much-mooted question, whether it is advisable to provide for the superintendent's quarters in bath building for cities of the first and second class. They should by all means be provided for. They may be placed in an upper story, in order not to diminish the working capacity of the bath, and the cost is more than compensated by the additional care and supervision which the building receives.

In discussing the planning and functions

of the public bathhouse a few words on the construction of the building may be of some value. The materials for the building, as in the hospital, must be primarily selected for their sanitary qualities, but they further require an ability to withstand the severe amount of the wear and tear received from the bathing public. The disintegrating effects due to the steam and water must also be considered, and it must be borne in mind that the waterproofing of the building must be as nearly perfect as possible. Eliminate as far as possible all openings in floors for pipings, standards or fixtures. It is safe to say that no bathing building yet constructed has not suffered more or less from leakage. The plumbing fittings throughout should be of the strongest kind, and sufficiently heavy to withstand the hardest usage.

Having indicated in outline the extent of the modern bath improvement, it is evident that our institutions do not compare either in size or impressiveness with foreign bath buildings; the value of this facility lies, not in pretentiousness, but in the sanitary and economic features, and it is in this direction that our Public Baths have shown progress. It may be that in the modern civic movement sufficient importance will be placed on this much neglected subject to allow some latitude for the realization of these ideas, which will result in a comprehensive system of Public Baths worthy of American communities and ideals.

SWIMMING POOLS.

By J. Leonard Mason, Newark, N. J.

THAT the showers or cleanliness baths are of primary importance is beyond question. The subject of swimming pools is, however, something which logically belongs to the students of public baths in general, and we should therefore go a step further in our observation and consider the whole subject from the standpoint of the Recreation Worker and Physical Educator.

The delights of swimming cannot be exaggerated. When one acquires a thorough knowledge of swimming it gives an added interest in life. I have seen the best results repeatedly demonstrated in School, College, Association and Public Swimming Pools.

In Boston and Brookline the good influence of the swimming pool spreads throughout the community. I think it is a mistake to say that swimming pools are institutions for the well-to-do classes only. Certainly the less favored citizen is even more appreciative of a chance for wholesome recreation. Modern methods of sanitary construction of swimming pools and strict regulations governing their use make them reasonably safe from contagion.

CONSTRUCTION.

First of all, the swimming pools should be constructed with the best known and most approved appliances for keeping the water clean and pure. Particular attention should be paid to the ventilation and lighting. The buildings should be made attractive both inside and out. Dressing-rooms should be made secure to avoid petty thieving, although valuables are generally deposited at the office by means of the envelope system. Dressing-rooms should be placed in a separate part of the building. It is unhealthful to put on the clothing in the warm atmosphere necessary around the pool.

The ideal length of the pool is 75 feet, providing for 25 yards straight dash. The depth of the water should be at least 7 feet at the deep end and 2½ feet at the shallow end, providing for non-swimmers and children. An improvised gate may be constructed to separate the deep and shallow parts of the pool, if there seems to be any chance of danger. A rope is sometimes used to divide the pool. Where no division is made the attendants should be very watchful, and able to meet any emergency, should it occur. The depth of the water should be plainly marked.

CONDUCTING POOLS.

Active, intelligent men and women should be constantly in attendance. These employees should see that the rules and regulations governing the use of the baths are strictly observed. A thorough shower bath, using soap, should be insisted upon before a bather may use the plunge. The proper length of time which should be used for a swim is generally between twenty and thirty minutes. No one showing any signs of an infectious malady should be permitted to use the pool. Trunks, towels and bathing suits should be thoroughly sterilized after once being used. These should be made of a tough material to stand the wear and Sizes may be shown by small brass tags securely attached. On women's and girls' hours washable curtains are hung in front of the shower baths. The attendants should be good swimmers, to enable them to properly safeguard the bathers. Poles and life-belts should be kept handy, as accidents are liable to occur, especially in a public pool where unknown persons are swimming. The general conduct should be orderly. Running around the edges of the pool should not be allowed, although under certain conditions the game of tag, which requires running, may be safely played. The charging of a small fee for the use of the swimming pool is found to

be desirable. It does not seem to be a hardship, and the money received helps greatly to reduce the cost of maintenance. Certain days and hours may be made free for boys and girls.

SWIMMING INSTRUCTION.

Swimming is an ideal form of exercise for all ages and both sexes. It is also a most practical means of self-preservation and life-saving. It is often, and truthfully, said that every boy and girl should know how to swim. In many cities systematic instruction is being given to Public School pupils.

Competitions for the town or city championship exhibitions develop wholesome rivalry, centering about the swimming pool. This is educational socially and morally, and the public bath becomes a community center of much interest. There are few kinds of athletic entertainments which are more interesting and instructive than a "swim-ming exhibition." To see how Johnny and Mary come out in the relay race always provides an exciting moment for the father and mother or grown-up sister. All of the events in a well-conducted exhibition of aquatic sports are interesting. For example, to begin with there are the regular races covering the short dashes and the longer swims, back stroke races, races with the hands tied, the feet tied, obstacle races, candle races, fully dressed races, fancy swimming, water polo, water baseball, water wrestling and any number of amusing and exciting performances which the imagination can conceive of.

There is truth in the statement that swimming is one of the cleanest sports in more ways than one.

PROBLEMS TO CONSIDER.

The main problem ever before us is the maintaining of the sanitary swimming pool. An unsanitary pool is something to be ever avoided, but that we should earnestly strive for a properly constructed and properly conducted swimming pool seems to be beyond question. A swimming pool is the best means of encouraging bathing.

The habit of taking a cleansing bath is often acquired through the regulations requiring it before the plunge may be used.

Let us not deny the less favored sections the blessing of the swimming pool, nor any section of the city for that matter. And altogether as we study the whole subject of bathing, let us link together the idea of public health with that of public recreation.

THE SANITATION OF SWIMMING POOLS.

By Wm. Royal Stokes, Chief of Bureau of Bacteriology, Baltimore, Md.

THE most important factor in the sanitation of the swimming pool is an unpolluted condition of the water, and in order to maintain such a condition it is first necessary to study the various ways in which a pool may become polluted. In the first place, such a condition may result if an impure water is used for filling the pool, and this can be easily detected by a bacteriological and chemical examination. A second source of infection results from the many bacteria washed off from the surface of the body of the bather, and some interesting experiments have shown how at times large numbers of such organisms from the outer surface of the body find their way into the water.

Bunker and Whipple mention the case of a stoker who bathed in a tub for three minutes, and the water increased in its bacterial content from 24 to 1,900 bacteria per cubic centimeter, the intestinal or colon bacilli increasing from 0 to 40 per cubic centimeter. Twenty-five billion bacteria were washed from the surface of a dirty hospital patient, while the feet of a boy yielded eighty million When the general average bacteria. in a swimming pool was per bather computed, the number varied on different days from 10 to 2,400 bacteria per cubic centimeter for each bather, and when one remembers that this amount is only about 15 drops of water the total amount of bacterial pollution for the entire body of water mounts up into the millions. These examples are simply cited in order to show how a pool may be rendered impure, but these contaminating organisms may not be capable of producing any disease. The main danger arises when they come from patients in the early stages of the various intestinal diseases, or from individuals who are convalescent, or who may be carriers of the bacteria of the various intestinal diseases.

It is a well-known fact that individuals

who have recovered from typhoid fever may at times harbor the germs of this disease for some weeks, or even months, after they recover from the disease, and from 2 to 5 per cent. of all persons who recover from typhoid fever become chronic bacillus carriers. Such persons carry about the typhoid bacillus for years in their intestinal contents, and at times act as sources of widespread infection. The bacilli of typhoid fever and other intestinal diseases are also present in the beginning of such diseases, or in cases known as walking typhoid, and such bacteria may be washed off the body during the process of bathing and swimming, and thus infect the pool. Then again, the water furnished to swimming pools is not always free from pollution, coming as it does at times from rivers or streams contaminated by the dwellings, or even towns and cities, situated on these watersheds.

It may be argued that even if a few typhoid bacilli get in such a large body of water the doctrine of chances would render the danger of infection very slight, especially since very little water is taken into the stomach during bathing. The large amount of water taken into the mouth and then rejected may introduce many bacteria eventually into the intestines, but the main danger is caused by the rapid increase of the bacilli in the warm water containing a progressively increasing amount of organic material which can be used as a food for the bacteria.

This increase of the organic matter present in the water has been demonstrated by Tully, who made a number of examinations of specimens from the pool at the University of Wisconsin. The nitrogen as free and albuminoid ammonia nearly doubled, and the nitrites septupled within a period of five days. That this increase of organic food encouraged the increase of bacteria is shown by the fact that water originally only contained 150 bacteria per cubic centimeter

in 48 hours contained 29,600, and on a second occasion the count rose from 30 to 21,900 in similar length of time. The number of intestinal organisms also increased, thus showing directly how the germs of the intestinal diseases may multiply in such water.

In describing the possibilities of infection from swimming pools I do not wish to be regarded as an alarmist, since I really believe that infection in this way is comparatively rare when compared to the danger from many other sources. A typhoid fever outbreak, however, in Walmer was thought to have been caused by a swimming pool, and some of the typhoid cases in Pittsburgh were also regarded as due to such a cause. The main danger, therefore, as far as infection goes, is from the bacteria producing typhoid fever, and the other intestinal diseases, but various authors mention cases of middle ear disease, pink eye, and other catarrhal conditions caused by the bathing pool.

It is obvious from the aforementioned facts that no bathing pool should contain intestinal or infectious bacteria, and as we now possess a simple remedy for such conditions, this should always be applied. The use of calcium hypochloride or bleaching powder is now proven to be a satisfactory

safeguard.

This chemical should be added daily* to the water in quantities corresponding to 0.5 of a part of available chlorine to 1,000,000 parts of the water, and when used in such an amount the intestinal organisms are promptly destroyed. This amount of chlorine would correspond to about 1.5 parts of the fresh bleaching powder, and the simplest way is to place the powder in a cheese-cloth

*The pool should be emptied once a week if the daily application of the bleach is made.

bag attached to a pole by means of a string. The bag is immersed in the water and then dragged back and forth until all of the "bleach" is dissolved. If it is desired to apply the material in solution, an engineer should be consulted and a simple apparatus can easily be installed that will add exact amounts of the solution to the water.

In addition to the disinfection of the pool the general sanitation should, of course, consist in the use of individual towels, as the social diseases may be transmitted by soiled towels, and even blindness may be caused by such unclean materials being introduced into the eyes. Towels, trunks and other fabrics used in the bathing pool should be boiled for at least five minutes during the process of washing before being used a second time, and the rule enforcing a shower bath before entering the pool is a good precaution. The use of a urinal in connection with a swimming pool is a bad practice, as the feet may become soiled and thus perhaps introduce typhoid bacilli from a typhoid carrier into the water, and the use of the screened toilet is to be preferred. Cuspidors containing a disinfectant should be provided for the use of bathers.

These suggestions, perhaps, may embody most of the important measures necessary for the proper sanitation of the swimming pool, and it might only be added that Seattle has thought enough of this subject to have framed an ordinance regulating this healthful recreation. Any other city contemplating such a step should consider the question of the proper disinfection of the pool itself, and this requirement should be added to the ordinance.

If such regulations are properly carried out the persons seeking this recreation also as a hygienic proceeding need never fear disappointment.

WEDNESDAY MORNING, MAY 14TH. DISCUSSION.

Mr. Beadenkoff: I would like to ask Dr. Stokes whether he agrees with the general principle of filtration and refiltration of polluted water.

Dr. Stokes: I do not believe that refiltration of water is necessary, unless for economic reasons. I do not believe that water filtered and refiltered could possibly be entirely purified. If refiltration is used, I think hypochloride should be added.

Dr. Baruch: The chair would observe that Mr. Crane stated the water which had been used at Amherst College for three years was recently examined chemically and pronounced an absolutely pure, clean water.

Mrs. Jacobson: I think the question of

injurious germs is an important one in public baths. We must be more careful in public baths, because of the numbers who use them and the non-resistance of the bathers.

Dr. Baruch: Did I understand, Mr. Windolph, that the pool would displace all other baths?

Mr. Windolph: There is a tendency in that direction.

Dr. Baruch: I am sorry to hear it. think the pool is valuable for recreation and swimming, especially now that we know that all bacilli are eliminated by refiltration and hypochloride of lime; but the pool will never become the cleansing bath for popular bathing. The cabinet shower combined with the pool will displace all other baths. If you must have a shower to clean the people you have all that expense, and the pool is simply a luxury. I have not the slightest objection to pools for swimming and recreation, but the shower bath with soap and water is the only cleansing bath that exists, and I think there will never be any better than that. The public pool bath is a luxury and the people who enjoy it ought to pay for it, and no doubt five or ten cents would not be too much. But the public shower is the cleansing bath; it is private, it is absolutely sanitary, the water never touches the next bather, and all these advantages are very plainly understood. The pool will continue to be the recreation bath.

Mr. Windolph: Small cities have shower baths always, but in the larger cities, I think, the tendency to combine shower and

pool will be preferred.

Dr. Baruch: Mr. Windolph said the pool uses less water than the shower. I have allowed the boys to take their showers while standing in the empty pool and then measured the water after the bath. You will find in our exhibit a picture of the pool in the New York Juvenile Asylum, to which I was physician. The quantity found was just one-eighth the quantity used in the pool bath. This enormous economy of water and coal for heating it is an eloquent plea for the shower.

Mr. Windolph: There is less water per bather in the pool bath than in the shower, because in the shower baths nine times out of ten the valves are out of order; the water is constantly running, because the attendance of the same transfer of the same transfer or the same transfer or

ants cannot see it so plainly.

Dr. Hale: You must have pretty bad conditions.

Mr. Beadenkoff: That is a shocking statement that the valves are out of order.

Mr. Windolph: That was in New York. Dr. Baruch: I have devised a plan to prevent that; a photo of it may be seen in the hall. The attendant controls all the water in the showers. It would take the bather ten minutes to arrange the temperature of the bath, while the man who is doing it several hundred times each day can do it in a few seconds. Mr. Windolph is guessing with regard to the quantity of water, while I have actually measured it and found the showers consumed eight times the quantity of the pools.

Mr. Eisenbrandt: There is no question in the world that for sanitary cleanliness, for hygienic purposes, the shower bath is the one best thing, but, as an association for the promotion of bathing in general, I do not think we should take a stand for one kind of bathing as against another kind. I think that, if I interpret the purposes of the organization rightly, it is that we should promote everything that pertains to bathing, and that means whether it be for cleansing reasons or for recreation. We can aid in promoting cleansing baths by and through the swimming pool, because, you take the young people, as you have yourself said, they are prone to go out into the open and into the rivers or the brooks and find some place where they can have a swimming pool, not to cleanse their bodies, but for recreation. And if through the swimming pool we can encourage these boys to take cleansing shower baths before they enjoy the swimming pool they will soon learn the necessity for using the shower. I think we will find both the pool and the shower bath the things we ought to stand for.

Dr. Baruch: I said very clearly that the swimming pool will always have its place for recreation and teaching swimming. I certainly advocate it; but the shower bath is the cleansing, hygienic and refreshing bath. I want it understood that I do not stand for one bath more than any other, but

each has its place.

Mr. Ross: It seems to me that the essential point about the question of pools is the administration. We all know there is nothing wrong with a good swimming bath, and that is the way people naturally take to bathing; but it seems to me that it is one of the most difficult problems to keep a pool bath sanitary. If you have large numbers of people going into pool baths you must

have somebody with a high sense of responsibility standing guard all the time. How in the world are you going to have sanitary pools? It requires something more than correct ideas; it requires administration; and I say that that is a very difficult thing to bring about. In Philadelphia we have over twenty pool baths, and I have not heard anything very bad about the pool baths recently, but I know that four or five years ago they were a continual source of annoyance, and there were over a thousand cases of disease that came from the improper management of the pool baths. In regard to the waste, a shower bath is a very expensive kind of bath, even if properly managed. Shower bath systems have been allowed to run themselves. Mr. Windolph spoke of seeing water escaping. You can overcome that to a great extent by keeping the temperature of the water to a minimum, say 100 degrees F. There has been great progress made in all lines toward a better regulation of hot water. It is perfectly possible now, and with no great difficulty, to keep it within two or three degrees of the desired temperature. And then another thing, there is a great deal of water wasted at the shower head. We used to have a shower of five inches; the one I had constructed is four inches.

Mr. Windolph: I have brought with me a new shower head which a mechanic has just made, in which the control of the flow of water takes place right in the shower head itself, and in order to cut down this terrific waste you can control it. At the same time this shower head is arranged to be self-cleansing. Instead of clogging up the holes, it is arranged to always keep the shower head in good shape.

There is another point that has interested me in the last ten years, and that is the mixing valve. That has not been simple enough. There is a valve in our exhibit which is very simple and automatic.

Mr. Mason: The whole number of showers may be operated by one man at Wellesley College, and at Plant's Shoe Factory in Boston and one in the Normal School, the idea being that they go in classes, any number of bathers from ten to one hundred, all receiving the same temperature. A good

many people like to take their own kind of a bath, and there is a good deal said against it on that point. But the thing we have all found that we have trouble with is the children, the boys and girls, with the individual shower baths. They never regulate the water properly. One gymnasium put a long pipe across the room with perforations in it so that forty or fifty children could use it at once.

Dr. Baruch: On the subject of the pictures shown, I would suggest that one cannot form an idea from these of the size of these baths. I took the pains to visit the ruins of the Diocletian Baths and I discovered that there is a public square standing over those baths; there was a lumber yard and the grand hotel and two or three other buildings besides Michael Angelo's Church, all built over the space covered by the Diocletian Baths. That will give you some idea of their immensity.

Mr. Cross: In using the valve Dr. Windolph was just speaking of, does the bather have to hold his hand on the valve until he has finished washing himself?

Dr. Windolph: Yes, he would have to do that; but if his body was wet he could soap himself and not have the water running over him. He can really get a better bath by getting his body wet and then soaping himself, rather than if the soap was immediately washed away by the running water. Refiltration does not remove the organic filth in solution, and three years of the use of refiltered water would introduce a large quantity of organic bodies into the water. Hypochloride of lime should always be used.

Dr. Baruch: I would like to ask Dr. Stokes who made the investigations about drinking water. It occurs to me that eventually the water would become thick with hypochloride of lime. Can you filter the lime out?

Dr Stokes: In the pool most of the liberated chloride combines with the organic matter.

Dr. Windolph: The use of filters in baths is a good thing. It keeps the mechanical part of the bath in good shape. While the initial cost may be considerable, I think in time it would pay for itself. It keeps the valves, in particular, in good shape.

THE EUGENIC MARRIAGE PRENUPTIAL MEDICAL CERTIFICATES*.

THOMAS W. HARVEY, M.D., ORANGE, N. J.

THE subject for discussion at this meeting is the advisability of the members of this Association demanding certificates of health from those asking for the sacrament of marriage.

The object of the requirement being to protect the individual would naturally narrow the character of the health certificate required to freedom from venereal disease. The value and necessity of this is almost axiomatic, and hardly needs argument. Every man and every woman should require it as a right without the intervention of the clergy, and every father and guardian should insist upon such knowledge before consenting to the marriage of their children or wards.

The minister, however, does not solemnize all the marriages, and there is a large number of the clergy who have no choice and must marry all applicants who can canonically be married.

To have any value as an eugenic measure these certificates must be required by state enactments and must be similar in all states. Such legislation has been enacted in several states, the laws, however, are tentative, halting and conflicting. I have therefore taken the liberty of considering this subject from a broader point of view than the immediate protection of the individual, and I shall also present for your consideration the difficulties in the way of securing certificates that shall be entirely trustworthy.

This requirement of a certificate of health as a preliminary to marriage is certainly a wise and humane procedure for the individual and invaluable for the development of the race. Theoretically it is ideal, the practical application presents many problems. The primary object is to protect the individual from certain contagious diseases, diseases which are de-

structive to health, happiness and even life, often entailing a lifetime of misery and invalidism upon the victim, and which every man and woman has a right to be protected from. A large proportion of our surgical work to-day is done to correct conditions caused by such diseases.

The secondary object is the protection of the coming generation, not only from the effect of the contagious venereal diseases, but also from inherited tendencies to such diseases as tuberculosis and insanity, and to degeneration and retrogression resulting in the hordes of defectives that crowd our asylums, our slums and our prisons.

The chief object of life is the perpetuation of the species. Nature provides for this by the enormous over-production of seminal agents, but Nature does not insure their healthy origination, their conjugation or their development. Society, in its varying development through the ages, has influenced all of these things; progress towards rational control has been made, but not at all proportionate to the progress in our knowledge of how such things should be controlled.

Students of Biology have elucidated many of the mysteries of generation, of inheritance, of the transmission of ancestral traits, of "sports", of reversion to type, etc. So far as plants and animals below man is concerned, the laws governing all such phenomena have been well observed and applied to the development of superior and ascending strains so that breeding for certain well-defined purposes is quite an exact science. It is perfectly possible to destroy the defective individual and to prevent the transmission of undesirable parental characteristics, noxious environment may be corrected and diseases eliminated.

To the human animal such conditions are impossible, although the history of the race gives us numerous illuminating

Read before the Ministerial Association of the Oranges, June 18, 1913.

instances of experiments along cultural lines, such as the exposure of the Spartan children, and the development of certain families to a high degree of power and physical superiority as in the ruling castes of many tribes and the nobility of medieval Europe. Even the religious persecutions of the past may all be studied advantageously from the same point of view, only in these instances it was the virile and ascending strains that were cut short, and the weakling and descending strains that were carefully preserved.

The mystery of the transmission of the vital spark is still the "will-o'-the-wisp," that it has been to the philosophers of all ages. Biology has taught us, however, some of the laws governing the phenomenon, and through the elaborate studies of the monk of Brünn we have learned the story of the transmission of ancestral traits and tendencies, and what is popularly known as inherited diseases. I feel that it is not impertinent to the subject under discussion to call your attention to the

story of heredity.

The new individual consists of the union of two cells which fuse and divide progressively. Immediately, there is a differentiation into the reproductive cells and the general somatic cells. The first remain quiescent holding in their substance the centrosome, that portion of the germ plasms that has come to them from the preceding generation full of all the potentialities of the new organism, to be preserved to be passed on to form the next generation carrying with it the determiners of the characteristics of the paternal and maternal germ plasms, and which retains in all its integrity the complete and stable organization of the fertilized ovum from which the whole organism develops; while the body cells, differentiated for all the many functions of the body grow and develop, varying in form and capabilities, responsive to favoring nurture or to depressing environment, making up the sentient individual that grows, matures and dies; so far as we know to-day they do not directly contribute to the next generation. Here we are on the border of the unknown and in a region of thought where is still being debated the question of the transmission of acquired characteristics. Thus the soma, the body, dies, while the germ passes on, carrying to the next generation part of

the past, taking something from each parent cell, living a sort of immortal life if you will, being poisoned by alcohol or opium, or sepsis, or syphilis in one generation, being deformed by lack of proper pabulum in another, stunted by inadequate nurture in another, hampered by vicissitudes of environment in another, stimulated to progressive variation by happy combination with strong advancing strains, held back or stimulated to vicious variations by mixtures with degenerating stocks. Ever true to type, in one generation there will be introduced an influence that will strengthen a tendency or a susceptibility to the infection of special diseases, in another the inheritance or resistance to such infections may be increased by fortunate mixture of strains to a point where the germ will carry with other potentialities that of immunity to such infections.

It is evident that these germ plasms which are to be passed on should be so mated as to increase the tendencies toward health and away from degener-Two blue-eyed parents ative diseases. will always beget blue-eyed progeny unless in some preceding generation brown or black eyes have been present. people with tendencies to tuberculosis will be pretty sure to transmit these tendencies to their offspring. Two syphilities similarly. Two idiots will transmit idi-Two individuals possessed with tendencies to degeneration, either insanity or criminality, will transmit such tendencies; a favorable environment will insure the crop. One diseased or decadent parent will mark the immediate and succeeding generations. At intervals in accordance with well understood laws, therewill appear the evidence of the taint, just as blue eyes or black hair, or supernumerary digits will appear in one member of a family of children.

Thus we may account for much of the originality of the world. Says Arnold Bennett, "Take the case of an individual with an imperfect idea of honesty. Now that individual is the consequence of his father and mother and his environment, and his father and mother of theirs, and so backward to the single-celled protoplasm; that individual is a result of the cosmic order, the inevitable product of

cause and effect."

By all means let us have protection for the individual, and for the future of therace by prenuptial health certificates. Who is to furnish them? Here is a situation where absolute honesty on the part of the giver of the certificate is a sine qua non; moreover, he must know how. These certificates are of no value if one variety can be bought in one town and another in a contiguous town, or if one state calls for a less stringent certificate than its neigh-The legislature of the State of Washington has had to repeal its marriage law because the requirements were so exacting that its citizens went across the border to be married. We would at once have the same conflicting laws that we now have in medical licenses and in divorce proceedings.

The proposition is evidently not a simple one. We have at the very beginning to consider the question of personal liberty. This has been the subject of a careful review in a recent number of the Journal of the American Medical Association, from which I quote.

"The maxim, 'salus populi suprema lex,' according to Judge Barker, amounts to this: Man in his natural state has a right to do whatever he chooses and has the power to do. When he becomes a member of organized society, under governmental regulation he surrenders, of necessity, all of his natural right, the exercise of which is or may be injurious to his fellow-citizens. This is the price he pays for governmental protection. But it is not within the competency of a free government to invade the sanctity of the absolute rights of the citizens any further than the direct protection of society requires."

"While it is generally recognized that a state can prescribe conditions under which persons may marry, the cases, nevertheless, seem without an exception to assert that such conditions must be 'reasonable.' The power of a state cannot be so exercised as to infringe arbitrarily or 'unreasonably' on personal rights; the public good must be the objective in any such legislation, that is, the act must be for the prevention of some offense or manifest evil, or the preservation of the public health, safety, morals or general welfare. There must be a clear, real and substantial connection between the assumed purpose of the enactment and its actual provisions. The act must in some plain, appreciable and appropriate manner tend toward the accomplishment of the object for which the power is exercised. The sovereign power of a state cannot be used as a cloak for the invasion of personal rights.

'In conclusion, it may be said that any bill drafted with the intent of crystallizing the present theories of eugenics into law, must conform to the 'rule of reason,' laid down by Judge Marshall in the Wisconsin decision. This is, that any restrictions on the acts of citizens must be 'reasonable' restrictions. Unless this point is kept in mind in drafting bills on this subject, and if any extreme or unusual restrictions are incorporated in the bill, there is danger that the courts may declare the whole law unconstitutional on account of the 'unreasonableness' of some provision, such as that requiring a physical examination as a prerequisite for a marriage license.

"The idea of such a statute should be rather as a guide and for instructive purposes than to designate any definite method of procedure. Inculcating the principle of John Stuart Mill, it could be forbidden that certain classes intermarry and then leave it with each individual as to whether or not he dare tamper with the health and welfare of the coming generation, or himself sustain a possible injury through an unwise act. This would be tantamount to embodying the thought to which the women's clubs desire to give expression, and would meet the possible objections of those individualists who are ever fearful of a too extensive development of the paternalistic theory.'

This question of the right of personal liberty will have a different solution every Thirty years ago it was difficult to restrain a man's personal liberty to the extent that he should not have all kinds of nuisances on his property offensive to the eyes and nose of his neighbor; to-day there is no thought of the restraint, the city makes him shut up his well, take public water and connect with the sewer. A man's personal liberty may be so restrained that he shall not give small-pox or scarlet fever to his neighbor, and a recent New Jersey law allows the State Board of Health to condemn to an isolation hospital a man or woman who persistently endangers the health of his neighbors by not observing the Board's regulations regarding tuberculosis. surely is no greater infringement of his personal liberty to compel him to refrain from infecting his wife with venereal disThe late Dr. Prince Morrow argued that the infection of another person with venereal disease should be a penal offense. Therefore we may assume that it is no infringement of his personal liberty to compel a man to furnish proof that he will not be a menace to his future wife. The time will come when it will be no infringement of his personal liberty to restrain his power to procreate defective children. Legislation along this line is being passed by some of the states and has been put in force in one state. This, however, is another story, as Kipling says.

If certificates of health are to be required prior to marriage there must be certain standards. We are primarily to require freedom from contagious disease and tuberculosis. There are destructive contagious diseases the existence of which in the person of either party to the proposed marriage should preclude marriage. Insanity, inebriety and inherited defects of intellect should also act as a bar to marriage. No man or woman

should marry an inebriate.

If we are to consider the future of the race none of the defectives should be allowed to marry, much less to intermarry. It is not difficult to find in the ancestral line of the criminal or moral degenerate the individual lunatic, the inebriate or the syphilitic who has handed down according to Mendelian laws a taint or mental twist that has developed a degenerate, a moral delinquent, the "black sheep" of the novelist, to bring down mortification and disgrace upon his family.

Every man and every woman should have the right to know that there is no danger of contracting such diseases. Such knowledge is possible only after a medical examination, and such medical examination to be of any value must be thorough and above suspicion as to its honesty. Absolute certainty as to the presence of syphilis is probably impossible without a Wasserman test; other diseases also require a special technical examination to determine certainty of diagnosis; not every physician possesses the technical knowledge to make such diagnosis.

Nothing is so cheap to-day as technical skill, it can be bought for any price, our court trials give abundant evidence of this. The question, "whose certificates are the ministers to accept?" is a vital one. Your own personal knowledge, or

even a popular reputation will not be the best guide to the choice of such authori-Prenuptial health certificates even for the primary purpose of preventing contagion to the innocent individual should be issued by a specially appointed, technically trained Bureau of Examiners who should be free from any suspicion of venality. This ought to be a municipal or state bureau. I believe that the best source from which such certificates should issue for those who can afford it, and all such certificates will cost money. will be a Surety Company that will furnish a certificate based upon an expert examination carrying with it an insurance of the absolute certainty of the findings of the examination; such a certificate being of the nature of a bond. Such certificates should insure against the presence of venereal or tubercular disease.

When it comes to the secondary object, the protection of and the improvement of the race, mere certificates of health are useless. The problem is not to prevent marriage, it is to prevent procreation. It takes very little thought to convince one that there are innumerable degenerates who ought not to be allowed to perpetuate their particular variety of the human species, and this applies not only to the idiots and to the insane, but to the many others where the tendency, generation after generation, is downward towards degeneracy, mental or physical.

There is one thing, however, that we have to remember, the human species is as liable to the production of "sports," as are the vegetable species, and these "sports," which we call geniuses are often sprung from pathological and decadent stocks. It has been from the careful nurture of "sports" that biological wizards like Burbank have developed, useful and ascending strains, but in the human species it is pretty certain that the law of reversion to type will hold true, and the offspring of a "genius" will rarely show an improvement, but more often will show a retrogression to a lower scale even than the traditional "poor but honest" progenitor of the human "sport."

I cannot urge too strongly my belief that the general practitioner, the family physician, the "reputable physician" of Dean Sumner is not qualified to give such certificates. Without discussing his lack of special technical ability we are forced to reject him as a proper person

to furnish such certificates because of the vital importance of the "professional secret," the inviolability of which is the mainstay of society as it exists to-day. And this applies to the minister and the lawyer as much as to the doctor. Suppose the memories of the men in this room could be read by every gossip of the daily press how much unhappiness would ensue, how many fair reputations would be smirched, how many happy families would be blighted? No, we cannot urge the breaking down of that defense of society that is found in the sacredness of the professional secret, hence the more important is it that prenuptial medical certificates of health be made by a disinterested public bureau, or by a properly established surety company which may be held to the same accountability as any other company.

Another phase of this subject is the accountability of the physician making such examinations. The person issuing a wrong or a lying certificate could be held for damages by the injured party, and a man would always have the right

of appeal.

At present there is no unity among the states as to the legal qualification for marriage even when there has been some attempt to adopt eugenic legislation. The usual qualifications refer to mental capacity, physical capacity, consanguinity, race, color or previous marriage. Ohio and Washington require certain standards of health. Connecticut and Minnesota have laws forbidding the intermarriage of persons who fall within certain classes, but the laws of neither state include persons afflicted with pulmonary tuberculosis and venereal diseases. Michigan, Delaware, New Jersey, North Dakota, Ohio and Kansas, among other states have legislated along similar lines. None of these laws have proved satisfactory or effective and do not furnish the remedy for the evil. The Idaho bill, consisting of thirty-six sections, repeals all previous legislation on the subject in that state. It defines marriage, states who may be parties thereto, designates certain conditions precedent which must be performed prior to the consummation thereof; names the grounds for divorce and provides certain penalties for any violations of its mandates. The part which deals directly with the subject of eugenics is as follows: Section 7, forbids the intermarriage of persons afflicted with insanity, feeble-mindedness, imbecility, epilepsy, syphilis, gonorrhea or with contagious venereal diseases, and also those who are common drunkards or addicted to habit-forming drugs.

Some of the developments of the discussion are worth considering. A proposed California law is to the effect that those unfit for parentage should be sterilized and then allowed to marry, which is a monstrous and an abominable proposition.

The Rabbinical teaching is that all eugenic matters are for the privacy of the home, and that there, the fathers of the race who are versed in the books of Moses and in the Torah, and are fully qualified, teach the doctrines of right living, personal cleanliness and personal purity. However, some of the most active workers in this new movement for the protection of the individual and the improvement of the race have been Jewish medical men.

A proposition from some of the Women's Clubs is to the effect that such certificates be required only of the prospective bridegroom, which is a reasonable proposition well supported by the facts, but it hardly squares with modern ideas of the equality of the sexes.

Certain clergymen of the Roman faith have taken the position that the requirement of health certificates is an impediment to marriage which should not be

countenanced by the Church.

This question of an impediment is important. This Association administers to just the group of people from whom the Eugenist would choose the parents of his improved human beings, yet these are the people who are voluntarily restricting the birth rate and depriving the race of some of its hope for the future, while from the warrens of the East Side swarm the litters of degenerates who make up the bands of gangsters and white slavers that threaten our lives and the sanctity of our homes.

CONCLUSIONS.

1st. Every woman and every man has a right to know that marriage will not be a menace to his or her health or to their offspring.

2nd. Such knowledge may only be obtained by a special medical examination quite different from the ordinary life in-

surance examination or the "good health and sound constitution" examination required for admission to the public service.

3rd. Such examinations should be made by a disinterested, incorruptible public commission, or by a surety company carrying with it an insurance provision.

4th. To be of any eugenic value such examination should be a state regulation and should cover all forms of degenerative disease, mental and physical.

5th. It is important to consider in this connection the effect of putting restraints on matrimony in causing celibacy and il-

legitimacy.

6th. It is also well to remember, in applying ideally perfect eugenic legislation, that many of the world's most brilliant mentalities have sprung from lowly stocks and have been associated with in-

herited physical disease clearly the outcome of family degeneracy.

7th. If the Ministerial Association concludes to require prenuptial certificates of health it should be clearly and popularly understood for just how much such certificates stand and the reliability of the medical examination must be beyond question.

8th. Probably the most that we can expect from the present agitation is the teaching the parent and guardian the certainty of the tragedy that follows the marriage of those who have any trace of venereal infection, and the safeguarding of some of our young women and their children from the diseases that are sure to follow such marriages. As a consequence we may hope that there may follow some improvement in the morals of our young men.

CARBON DIOXIDE SNOW.

Surgeons use pencils made of carbon dioxide snow to stripple off warts, moles, birthmarks and other skin disfigurements; even skin cancers are cured this way. would be used oftener if the preparation of the stick were not so troublesome and costly. Dr. M. B. Ahborn, of Wilkesbarre, Pa., has devised a method by which these objections are largely eliminated. He gets from any drug store an ordinary tank of carbon dioxide such as is used for soda water charg-Tilting this tank at the proper angle gives sufficient pressure at the vent to insure use of all the gas in liquid form it contains; for the liquid is in the dependent portion of the tank. To this end Dr. Ahlborn has devised an inexpensive holder of oak on casters which will support the tank firmly at about a right angle and allow it to be easily moved. The tank itself is best placed in a cool cellar, since its gas is liable to explode in a temperature much above 70 degrees F. The snow is then made in an ordinary glove finger, preferably of porous leather, but without pinholes; this is tied firmly over the vent of the tank by means of a shoe string fastened in a single bow knot (so as to be quickly loosened, thus

insuring as little as possible melting of the crayon). This string is wrapped two or three times firmly about that part of the finger which is pulled over the vent. The gas is then gradually turned on, by means of a small wrench which comes with the tank, until a stream of it balloons the finger just to tightness, but not more, lest the latter burst. Presently the glove finger will be found hard as an icicle when, the string being untied, it is pulled off the vent. The snow may be kept some hours if put in a large test tube or closed porcelain dish, and set directly on the ice, in a refrigerator. However, it had best be used at once by running a sharp knife around the glove finger about an inch from the tip (not cutting deeply into the snow). The loose end of the finger is then pulled off leaving an ice mould. remainder of the glove finger becomes the holder, protecting the surgeon from the freezing, which is applied from the point, where it is intended to do good, upon the patient's skin ailment. The end of the crayon can be brought to a point like any lead pencil by means of a sharp knife, and can thus be applied to a very minute area.

RURAL SANITATION.

THE COLEMAN PLAN.

THE citizens of every rural community should hold an annual meeting not only to elect a local guardian of health but to assign other duties which should be divided out in an orderly manner. No community can prosper where the citizens live in selfish loneliness. Scientific farming by individuals, with co-operation and combination by the whole community are essential to health and happiness in rural life. Farming is more suitable for the basis of ideal living than for quick profits. Fairs at the county town may drain and weaken the country, but a neighborhood fair helps and stimulates. There should be quarterly and monthly market days in each country district.

According to the "Coleman Plan," at the annual community meeting, the following co-operative workers may be elected: 1. Barber. (Unlike the town barber his chair and tools may not bring the risk of infection by persons from the whole town and county). 2. Blacksmith. 3. Butcher. (The farmers will take animals in turn to him for butchering and will not have to eat rancid salt meat). 4. Buyer and Seller. (He will soon become expert and will get discounts for his neighbors by buying in large quantities). 5. Cobbler. 6. Carpenter and lumberman. 7. Carrier and to distribute meat, bread, and supplies, and to

collect things to be sold. 8. Health guardian (against infection, the breeding of flies and mosquitoes). 9. Freighter (to town once a week). 10. Referee (a wise and justminded man, if one such can be found). 11. Road foreman. 12. Sports manager (who will plan a good ball game ground, swimming hole, recreation grove, and arrange holiday celebrations, match games, athletic meets). 13. Junker (to buy and sell second-hand articles). 14. Seedsman, to develop and save the best seeds. Chairman of meetings at Neighborhood Center (the schoolhouse?). 16. Storekeeper. 17. Teacher. 18. Tinker (for tinware, sewing machines, clocks, etc). 19. Trustee for school. Of course all remain farmers. The storekeeper, for example, opens the store for one hour each day.

The community work for the women may be as follows: 1. Baker. 2. Butter and cheese maker. 3. Manager girls' canning club. 4. Manager of school or neighborhood fair. 5. Merrymaker, to arrange parties, plays, picnics and merrymakings. 6. Postmistress. 7. Reading club manager. 8. Referee. 9. Song and glee leader. 10. Seamstress and tailor. 11. Teacher. 12. Trained nurse. (She, in common with many of the other workers, should miss no opportunity for study and training in her special work.)

INSPECTION OF WATER-SUPPLY.

LET me for a moment note the fact that we have a most thorough inspection of the milk supply, of our meat supply, of food adulterations, but in how many communities in this country have we properly protected not only the inhabitants, but the stranger and traveler from infection by preventing the drinking of contaminated water from pumps and wells? You ask the average farmer or average person what he thinks about the water in the well on his premises and he will invariably tell you that the water is pure, clear and sparkling; and yet how many of these wells may not be contaminated with pathogenic germs? The inspec-

tion of many other things is no reason why a most thorough inspection should not be made of the wells, lakes, rivers and streams that all water supply not only in the cities but in the farming districts should be guarded. The state or county should order a most thorough control, and a periodical examination should be made and an official notice posted at all sources of water supply. stating the condition of the water, whether it is pure or otherwise, whether it is liable to bring about a disturbance of the gastrointestinal tract or not. - Francis E. Fronczak, in American Journal of Public Health.

WHO ARE THE VIVISECTIONISTS?

According to Darwin, one of the chief mental differences between man and woman is woman's greater tenderness. Of this feminine tenderness the world has been able to judge on a vast scale during the last two or three years, writes Mr. Finck in Romantic Love and Personal Beauty.

According to a statement in *Nature*, 30,-000 ruby and humming birds were sold in London some years ago in the course of one afternoon, and the number of West Indian and Brazilian birds sold by one auction room in London during the four months ending April, 1885, was 404,464, besides 356,389 Indian birds, without counting thousands of Impeyan pheasants, birds of paradise, etc. A writer in Forest and Stream mentioned a dealer in South Carolina who handled 30,000 bird skins per an-"During four months 70,000 birds were supplied to New York dealers from a single village on Long Island; and an enterprising woman from New York contracted with a Paris millinery firm to deliver during this summer 40,000 or more skins of birds at 40 cents each. From Cape Cod, one of the haunts of terns and gulls, 40,000 of the former birds were killed in a single season, so that at points where a

few years since these beautiful birds filled the air with their graceful forms and beautiful snowy plumage only a few pairs now remain." It is estimated that not less than five million birds of all sorts were killed in a year for purposes of ornamentation, wrote Mr. Powell in the New York Independent. A correspondent of the New York Evening Post saw at an art exhibition a young lady with "nothing in her face to denote excessive cruelty," who wore a hat trimmed with the heads of over twenty little birds; and the same paper remarked editorially: "No one can tell how large a bird can be worn on a woman's head by walking on Fifth Avenue. It is necessary to take a ride in a Second Avenue car to get the full effect of the prevailing fash-There one may see on the headgear of the poorer classes, and especially of colored women, every species of the feathered kingdom smaller than a prairie chicken or a canvas-back duck, and every color of the rainbow.

It was Science, edited by men, that started the agitation against women's cruel and tasteless fashion—a fashion which not one woman in a hundred apparently refuses to conform to.

CORRESPONDENCE.

(Subscribers are heartily invited to write us on any subject to which THE GAZETTE is devoted.)

A reader and friend, though renewing her subscription, wrote September last: "The GAZETTE is not as good as it used to be."

[Hang on a bit and see what happens.— Ed.]

A subscriber from Hawaii writes: "The GAZETTE is, if possible, better than ever. A noted man in Montreal said to the writer that he would not sell the information obtained from one article, which appeared in your paper, for \$15,000."

[And the subscription price of The GAZETTE is just one dollar; one dollar and a half to Foreign Countries. Hawaii is not a Foreign Country.]

A SUBSCRIBER writes: "In the November issue of the Gazette there is an editorial on Infantile Paralysis, in which you refer to Dr. Rosenau's important work. Will you please tell me where I can obtain more of what Dr. Rosenau has written on Infantile Paralysis?"

[Dr. Rosenau writes at length on this subject in his very readable book on Preventive Medicine and Hygiene, which every public library, at least, should contain. The family physician can procure also a reprint of his paper The Mode of Transmission of Poliomyelitis, which appeared in the Journal of the American Medical Association, May 24, 1913.—Ed.]

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

Leisure Hour was founded in the belief that the physician is but human; that he loves the beautiful in thought and sentiment as expressed in literature, and that he is at times surfeited with technical matter. Short, crisp contributions on any of the subjects named in the sub-heading are invited to this department.

MARRIAGE HINTS.

Reason should be consulted—that is, if love will allow it to have the floor for a single moment. The truth is, however, if one might use a term prevailing in pugilistic circles, that in love matters reason is like to be most hopelessly "floored." It were well indeed if, before it is too late, men might have an eye to Benjamin Franklin's advice in regard to large families and the age of marriage.

Mr. Henry T. Finck, in his fine book on Romantic Love and Personal Beauty, has collected some statistics, concerning which Mr. Galton observes: "One of his conclusions was that morality is more often found among members of large families than among those of small ones. It is reasonable to expect this would be the case, owing to the internal discipline among members of large families, and to the wholesome sustaining and restraining effects of family pride and family criticism. Members of small families are apt to be selfish, and when the smallness of the family is due to the deaths of many of its members at early ages it is some evidence either of weakness of the family constitution, or of deficiency of common sense, or of affection on the part of the parents in not taking better care of them. Mr. Holland quotes in his latter to be a piece of advice by Franklin to a young man in search of a wife, to take her out of a bunch of sisters, and a popular saying that kittens brought up with others make the best pets because they have learned to play without scratching. Wm. Gull has remarked that those candidates for the Indian service who are members of large families are on the whole the strongest."

A second bit of advice given by Franklin is, perhaps, less unquestionable: "From the marriages that have fallen under my observation I am rather inclined to think that early ones stand the best chance of happiness. The temper and habits of the young are not become so stiff and uncomplying as when more advanced in life; they conform more easily to each other, and hence many occasions of disgust are removed. ... 'Late children,' says a Spanish proverb, 'are early orphans.' With us in America (1768) marriages are generally in the morning of life; our children are, therefore, educated and settled in the world by noon; and thus, our business being done, we have an afternoon and evening of cheerful leisure to ourselves. . . . By these early marriages we are blessed with more children; and from the mode among us founded by nature, every mother suckling and nursing her own child, more of them are raised. the swift progress of population among us, unparalleled in Europe".

"Marriages," says Theodore Parker, "are best of dissimilar materials"; and Coleridge remarks, similarly: "You may depend upon it that a slight contrast of character is very material to happiness in marriage." But would it be possible to present two individuals who did not present "a slight contrast of character"? Coleridge did not, apparently, think much of the average conjugal union of his day: "To the many of both sexes, I am well aware, this Eden of matrimony is but a kitchen garden, a thing of profit and convenience, to an even temperature between indifference and liking. What a married person wants is a soul mate as well as a house or yoke mate."

Young men are often warned not to marry for beauty, because it is but skin deep. But surely a millimetre of beauty is worth more than a yard of ugliness, though whitewashed with rank, money or general utility.

SUGAR AN EXCELLENT FOOD.

Much has been printed about sugar: scare heads and points "made to tell" (if nothing else) as to its unwholesomeness, its poor food value, the diseases it leads to, and its adulterations; an equally foolish extreme has been reached in articles on letting a child have what it wants when it wants it, and the like. Mrs. Mary Hinman Abel disposes of a great deal of nonsense regarding this sweet in Farmer's Bulletin 535, a sane, precise and comprehensive account of Sugar and Its Value as Food¹. Meat has been a food ever since man could catch and tear to pieces his prey, or could grasp a stone or fashion a weapon with which to kill; bread has been the staff of life perhaps as long: but only in the forties of the last century did sugar come into general use. Some sixteen million tons of sucrose sugar are cropped annually in the world; and of this the American people consume nearly 82 pounds per capita. And, considering the energy this food furnishes, it should stand very near the head of the dietary list in point of economy. It should be a poor man's food; ten cents worth of it at six cents the pound would furnish some 3,000 calories, which, for a carbohydrate is coming it very well indeed. Sugars, of whatsoever grade now marketed, are practically pure, (if for no other reason), simply because the low price of cane sugar by comparison with substances which might be used for adulteration, pro-

¹Any citizen may have this bulletin by applying to the U. S. Dept. Agriculture, Washington, D. C.

tects the finished product from such at-Adulteration would not pay, because the starch, lime water, sand, finely ground rock and the like, alleged to be used, would cost more to buy or to prepare than the sugar itself. Nor does sugar, eaten moderately, produce gout, or cause diabetes or harm the teeth. A great deal of sugar is consumed for its flavor or as an addition to food; but our people should learn to recognize its great intrinsic nutritive value—which is enhanced by its ready Sugar should be added freely solubility. to the dietary of the undernourished, invalids and children. If extreme sweetness is objectionable the mildly sweet milk sugar should be used to fortify the "foodintake." In many American families about two pounds of sugar are consumed every week by each member. Such amounts are reasonably wholesome as they certainly are Perhaps, for the present strengthening. at least, such limits had best not be exceeded, for "the question of possibly permanent injury from the use of fairly large amounts of sugar seems to be an open one. Of course, here as in everything else in the "Candy cosmos, temperance is the word. is delicious," observed a gentleman in Patience; "but candy for breakfast, candy for lunch and candy for dinner, might pall." And, as sugar is a concentrated food, it will be best digested when incorporated with other materials—puddings, fruits, ices and the like, which dilute it or give it the necessary bulk. Water should be drunk freely when eating sugar.

THE OLD POSTERIOR OPERATION.

"I see they have operated on a Philadelphia boy's head to make a better boy of

"That isn't where my dad used to operate on me to make a better boy of me."—Houston Post.

SAFE ON FIRST.

MOTHER (looking through magazine)-Darling, I see from statistics given here that every third baby born in the world is a Chinese.

Father (fondling his first born)—Then, thank God, this is our first.—Everybody's.

EUGENIC.

Susie (aged 6)—And when we grow up

we'll be married, won't we, Tommy?
Tommy (sadly)—No, Susie, I can't marry into your family. Your papa has weak eyes and your auntie has spasms.-Free Lance.

HOW ABOUT YOU?

"IT is a well known fact that mostly everybody has a well-developed bump of curiosity," said the practical man.

"Think so?" inquired the other. paragraph will turn the book upside down." "Yes; most of the people who see this -S. C. Clark in Lippincott's.

HOT ICE.

We have ever with us hot air, more than plenty, especially near election time—but very little hot ice. All there is so far of the latter seems to have been made by Professor Percy W. Bridgman, of Harvard University. And this ice is so hot after it has been frozen that it will boil alcohol, its temperature being 173° F. To make hot ice Prof. Bridgman puts water in a specially constructed steel bottle which is able to withstand a pressure up to 20,000 atmospheres—equivalent to 300,000 pounds to the square inch; though this is not his limit, for he has attained pressures up to 24,500 atmospheres, or nearly 400,000 pounds to the square inch. Since the ordinary atmospheric pressure on the surface of our bodies is about 15 pounds to the square inch, we must admit Prof. Bridgman has certainly achieved some pressure—indeed, ten times as great as in our mightiest cannon. water is first heated to 173° F.; despite this temperature the H₂O becomes solid and remains so as long as the hydraulic pressure is applied.

Perhaps it is just as well there isn't any of this kind of ice at present in nature, or any manufactured outside the laboratory, for the reason we shall presently see.

The scientific world knows now of five kinds of ice, as indicated in the accompanying diagram, which depicts the temperature ranges and the pressures within which each type of crystallization (that is, conversion of fluid water into solid ice) normally occurs. (O° C.=32° F.; 173° F.=78.3° C.).

Ice I is our common or garden ice; and oddly enough it is the only freak ice in nature (except possibly ice IV, to be hereinafter mentioned). Ice I is a freak because it is a natural liquid which freezes to a solid lighter than the liquid itself. science of physics knows of only one other freak that behaves in this way—liquid cast iron, which, like water, becomes lighter as it hardens. All the other of the five kinds of ice are "normal"—that is, they are heavier than the water from which they And as noted, there isn't much, probably not any of these forms of ice in nature; else they would sink to the bottom of lakes, ponds and seas as rapidly as formed, destroy all the fish, dam up every outlet, put every reservoir in existence out of commission, and make any kind of life, as we understand the term, impossible.

Ice II and III were first discovered and made by the German scientist Tammann. Bridgman discovered ice IV and V in the order stated. But Tammann thinks ice IV exists within ice I; perhaps the former represents a peculiar action in the latter due to dissolved air in the ice; for this reason ice IV is not represented on the diagram; and ice VI as shown represents the fifth ice, as at present isolated—the hot ice of Bridgman.

But how are these different kinds of ice evolved out of plain, everyday running water; they have all precisely the same chemical formula (H₂O); but like many "isomeric" compounds they exhibit different phenomena, behave differently. To illustrate: Oil of lemon and turpentine have precisely the same chemical formula (C10 H₁₆) their difference in taste and other qualities being due to the various ways in which the same number of similar atoms are arranged in respect to one another in the two substances. Any one will believe this who has been "up against" the turpentine flavor in a cheap, artificial "lemon extract," in ice cream or candy or lemon cake. planation of isomeric compounds behaving in different ways is that forces acting between the elemental atoms act only in certain directions from each other, and so produce different arrangements, and therefore different substances, under different circumstances. It is about the same with the five different kinds of ice; except that the principle is applied to the molecules of water, instead of the atoms of hydrogen and oxygen which form the water. It used to be assumed that the forces acting between aqueous molecules act from each molecule equally in all directions from the molecule; but now it seems they act only in certain directions.

What will these experiments lead to? They help to the formulation of an adequate theory of liquids, no present theory explaining all the known facts. And geophysicists will probably have to "guess again," since they have rather assumed that the interior of the earth is liquid; Prof. Bridgman's researches would go to prove that the earth's interior is solid, and very hot too, by reason of the tremendous pressure of the earth's surface.

NUGGETS.*

It is in the putting forth of the hypothesis that the true man of science shows the creative power which makes him and the poets brothers. His must be a sensitive soul, ready to vibrate to nature's touches. Before the dull eye of the ordinary mind facts pass one after the other in long procession, but pass without effect, awakening nothing. In the eye of the man of genius, be he poet or man of science, the same facts light up an illumination, in the one of beauty, in the other of truth; each possesses a responsive imagination. Such had Bernard, and the responses which in his youth found expression in verses, in his maturer and trained mind took the form of scientific hypothesis.—Foster.

The imagination of Darwin or Pasteur, for example, is as high and productive a form of imagination as that of Dante or Goethe, or even Shakespeare, if we regard the human uses which result from the exercise of imaginative powers and mean by human uses not merely meat and drink, clothes and shelter, but also the satisfaction of mental and spiritual needs.—Dr. Eliot, of Harvard.

Some day, perhaps, the mystery of life and being which presses on the physiologist as on other men, and indeed with a double man may know, not only what he is, but

*MEDICAL RESEARCH AND EDUCATION. The Science Press. New York, and Garrison, New York. The writers whose contributions make up this book are: Richard Mills Pearce, William H. Welch, W. H. Howell, Franklin P. Mall, Liewellys F. Barker, Charles S. Minot, W. B. Cannon, W. T. Councilman, Theobald Smith, G. N. Stewart, C. M. Jackson, E. P. Lyon, James B. Herrick, John M. Dodson, C. R. Bardeen, W. Ophills, S. J. Meltzer, James Ewing, W. W. Keen, Henry H. Donaldson, Christian A. Herter and Henry P. Bowditch. And these eminent men have dwelt upon such vital subjects as: The Efforts of Isolated Investigators in Medicinc, The Development of Laboratories for the Medical Sciences, Pasteur and the Era of Bacteriology, Present Day Methods and Problems, Medical Research in American Universities, The Public and the Medical Profession, The Experimental Method, Chance and the Prepared Mind, The Medical School of the Future, The Interdependence of Medicine and Other Sciences of Nature, Imagination and Idealism in the Medical Sciences, Medicine and the University, The Relation of the Hospital to Medical Education and Research, The Medical Education, Some Tendencies in Medical Education, Certain Ideals of Medical Education, The Career of the Investigator, The Outlook in Medicine, Problems, Methods and Organization of Research with Special Reference to Physiology, The Improvement of Medical Teaching, The Educational Function of Hospitals, Clinical Medicine.

weight, may be solved. Some day, perhaps, why he is. To-day, after but three thousand years of history and three hundred of science, it is indeed difficult to imagine how this can be. We can only trust that it may be. Some far-off to-morrow may arrive when the clearer vision of a million of years of science and of history may fathom the secret and read the reconcilement of the hopes and the destiny of man.

"A hair, they say, divides the false and true; Yes; and a single Alif were the clue, Could you but find it, to the Treasure-house, And peradventure to the Master, too."

-Stewart

There is one quality the possession of which is the supreme need of the physician, without which he is as unfit and useless as a tone-deaf musician or a color blind painter; that is, the faculty of exact observation.—Minot.

Accurate observation is by far the most difficult art which mankind has ever essayed. A nation may count on furnishing abundance of military talent, plenty of politicians and statesmen, enough of competent lawyers; it may even hope to have gifted artists and authors; but it can scarcely expect to produce a single master of the art of observation in a century. In a century Germany produces one Helmholtz, France one Pasteur, England one Darwin—an American peer of these three is yet to become known.—Minot.

The most familiar sign of the public misconception is displayed in the effort of the daily press to furnish information on medical topics. With rare exceptions these efforts consist of sensationalism, personalities, wonder-tales, absurdities, and a general display of the haste and incompetence of the writer. Every medical article written for the public press should first be submitted to a competent medical expert for revision. More pernicious still is the influence of a score of semi-medical journals which cater to the taste for misinformation and absorb a large portion of the \$50,000,-000 paid annually in this country in the advertisement of quack medicines.—Ewing.

The discoveries which have transformed the face of modern medicine have been in the field of infectious diseases, and in no other department of medicine could new knowledge have meant so much to mankind, for the infectious diseases have a significance to the race possessed by no other class of disease, and problems relating to their restraint are scarcely less social and economic than medical.—Welch.

We cannot agree exactly on what a "good doctor" is. Some will say "Practical"; some will say "Knowledge"; some will say "Heart."—

Lyon. (The good doctor should be all of these.)

Wonderful as were the isolated achievements of the great discoverers in medicine in the early centuries, the great continuous advance in medicine during the past eighty years resulted from organized laboratory effort based on the principle of exact experimental methods; and it is the duty of the university so to organize its laboratories and hospitals that this advance of medicine by research may continue, side by side with teaching, as a university function of benefit to students and faculty as well as to the state and the general public welfare, and thus be an aid to the advancement of civilization.—

Pearce.

It is well that the sciences of nature hold out attractions to so many different types of mind, for the edifice of science is built of material which must be drawn from many sources. A quarry opened in the interest of one enriches all of these sciences. The deeper we can lay the foundations and penetrate into the nature of things, the closer are the workers drawn together, the clearer becomes their community of purpose, and the more significant to the welfare of mankind the upbuilding of natural knowledge.—Welch.

Every citizen should be inspired with love of personal and public hygiene, as were the Greeks. Every physician should be deeply grounded in physiologic medicine and provided with proper facilities for using it practically. Every public health officer should know thoroughly the contributions of etiologic medicine. All efforts should be made to promote the most fundamental needs of society.—Bardeen.

He who purposes to study medicine should have in high degree three gifts, not one of which is common among mankind, yet all of which he must have: the power of reliable observation, intellectual endurance; loyalty.—Minot.

The die is cast, the book is written, to be read either now or by posterity, I care not which. It may well wait a century for a reader, as God has waited six thousand years for an observer.—Kepler.

We may regret the loss of many charming features which have been erased from the landscape of science by all of this minute specialization, of which no one can foresee the end, and such a sentiment is much the same and as unavailing as that for the return of the days of the stagecoach. The great instruments of progress in modern life—steam and electricity in the industries, subdivision of labor and increasing specialization in science—are not altogether lovely, but they are the conditions of advancement in material prosperity and natural knowledge.—Welch.

I like to think of medicine in our day as an ever-broadening and deepening river, fed by the limpid streams of pure science. The river at its borders has its eddies and currents, expressive of certain doubts and errors that fringe all progress; but it makes continuous advances on the way to the ocean of its destiny. Very gradual has been the progress of its widening and deepening, for it is a product of human ingenuity and artifice, and only skilled engineers could direct the isolated currents of science into the somewhat sluggish stream of medical utility.—Herter.

It is the privilege and duty of hospitals to extend their field of usefulness by opening their wards more freely to undergraduates in medicine, to elevate the standards of work done by nurses, internes, residents and attending staff, to foster research. By so doing they are not harming the patients, but are rather insuring them better and more skillful treatment. They are serving to enlighten and educate not only the individual, but the observing public as well, eager to learn and to be instructed in knowledge of medical matters.—Herrick.

BOOK NOTICES.

HYGIENE FOR THE WORKER, by Wm. H. Tolman, Ph.D., and Adelaide W. Guthrie (Crampton's Hygiene Series). New York, Cincinnati, Chicago, American Book Company. This book, by the Director and his Associate, of the American Museum of Safety, which has done so much for the safeguarding of the workman, presents in brief space and terse, plain language, based on actual shop conditions, and it sets forth in a practical way matters most important for good health, happiness and efficiency.

THE PEOPLE'S HEALTH, A TEXTBOOK OF Sanitation and Hygiene for the Use of Schools, by Walter M. Coleman, New York, The Macmillan Company, 1913. \$.70. Cicero, twenty centuries ago, declared saens populi suprema lex; the health of the people is the supreme law. Now, in the twentieth century, the science of preventive medicine is demonstrating wonderfully how the people's health, upon which the stability and prosperity of any nation must depend, can best be maintained. Coleman has produced an excellent and most informing book on this subject, and it is well and profusely illustrated—a very valuable feature; for it is surprising how much can be learned from pictures alone.

THE SOLDIER'S FOOT AND THE MILITARY SHOE, by Edward Lyman Munson, A.M., M.D., Major, Medical Corps, United States Army. 54 illustrations. Approved by the War Department, Fort Leavenworth, Kansas. This excellent "Handbook for Officers of the Line" will be found most useful and enlightening by the orthopedist and by the general practitioner as well. Although it was intended for the soldiery, it will have decided application to the footwear of women who frequently, in obedience to the dictates of fashion, wear things on their feet that produce results comparable to those obtaining among certain of their Chinese sisters.

Pyorrhea Alveolaris, by Friedrich Hecker, B.Sc., D.D.S., A.M., M.D., St. Louis, C. V. Mosby Co., 1913. \$2.00 net. Dr. Hecker, after careful observation covering a number of years, believes that Pyorrhea Alveolaris (Riggs' Disease) is

the result of constitutional and exciting causes which lower the vital resistance of the alveolar process, the gum and the peridental membrane; the alveolar disease exists because the body is out of harmony physiologically. From the physician's viewpoint and understanding we believe that Dr. Hecker is right; and that his book is unusually well worth the medical consultant and the family practitioner's study. The author demonstrates a case in which pyorrhea has been artificially produced in a guinea pig. He dwells on the autogenous vaccine treatment. The book is superbly and informingly illustrated.

DORLAND'S AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. Newman Dorland, M.D., editor "American Illustrated Medical Dictionary." Eighth Edition, Revised and Enlarged. 32mo, of 677 pages. Philadelphia and London: W. B. Saunders Company, 1913. Flexible leather, gold edges, \$1.00 net; thumb index, \$1.25 net.

It is said that one's ordinary vocabulary seldom goes beyond several thousand words. And although the practitioner must have a medical lexicon in his library, he will ordinarily need for ready reference to know about several thousand medical terms only. For the latter purpose Dorland's is altogether adequate. It is superbly bound; and this eighth edition defines several hundred more words than did the seventh.

Anatomy and Physiology for Nurses. By LeRoy Lewis, M.D., formerly Surgeon to and Lecturer on Anatomy and Physiology for Nurses at the Lewis Hospital, Bay City, Michigan. Third Edition Revised Thoroughly. 12mo of 326 pages, with 161 illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$1.75 net.

A nurse (despite the opinions of some authorities) does not need to know so much about anatomy and physiology as a doctor has to, or ought to know. She needs, however, to acquire the established and essential facts in these sciences. Such facts are simply, comprehensively and adequately set forth by Dr. Lewis. A valuable feature of his volume is the set of review questions at the end of each chapter.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M. D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

THE CHILDREN-GOD BLESS 'EM.

I have no hesitation in saying, from a wide experience, that a due amount of care has never yet been bestowed upon the young human being.—Clement Dukes.

Ir this broad assertion by one of the leaders in pediatrics causes you some pangs of conscience, there is yet hope for you! Who ever understood a child? What one among us all has ever had the wisdom and the love to treat a child with absolute fairness? The children are our accusers today, even with all our boasted advancement in their protection and care. The children are challenging us to give them a better chance, if we expect a fair return from them.

The forces of society were never better organized than to-day for studying and investigating child life. Never before have we had so many appliances for improving the physical and intellectual conditions of childhood. Whether we are making the best use of present opportunities only time can tell. Surely every parent, every physician, teacher, and nurse ought to know that by taking an interest in the children all the resources of society may be commanded for their benefit.

It is for the purpose of improving our understanding of the child, and especially some of the ill-favored types of children, that we print this month the excellent paper by J. H. Buchanan. A study of this paper will doubtless bring to the minds of our readers individual instances of children who have been misunderstood and neglected or mistreated. What can we do for such cases? It should be our business to find out forthwith.

Many superstititons and traditions from the dark past have to be overcome before the child of this enlightened age can receive justice at the hands of ignorant parents or nurses. Many a child is allowed to suffer torments from pediculosis because his friendly parasites are supposed to act as a preventive of the diseases incident to his age—a sort of living health insurance which costs him nothing and covers about everything.

A week ago the writer was pleading with a mother to induce her to have her child treated for a nasty running ear. No. It would be dangerous to cure the ear and drive this drainage to another part of the body. The badness was running out of the boy all right, and as long as it kept running the mother was pleased.

Children are popularly supposed to "outgrow" all sorts of physical and mental troubles; the worse the defect the more likely to disappear when the proper age arrives for that particular kind of elimination. A boy in a private school was found suffering from eyestrain and a chronic inflammation which disfigured the eyelids. The school medical inspector advised his parents to place the boy under a doctor's care, but the mother said it would be unnecessary, because her neighbor, who had seen a similar case in the Old Country, assured her that her boy's eyes would be quite well when he was twenty years old. As the boy had only nine years to wait for a spontaneous cure and nothing much to do in the meantime but go to school, of course it wouldn't be worth while to bother with a doctor.

If some thrifty folk managed their business as they do their children they wouldn't have any business. But business is business and children are only "kids"—and plenty, at that.

Sometimes it is the doctor who needs to be reminded that children have rights, even though they may be his patients. We have just learned of a lad who was taken to the hospital and properly chloroformed by one doctor while another doctor proceeded to "operate" on his adenoids. When the affair was over the operator explained to the mother that he had only lanced the adenoids. She is now looking for another doctor who will remove them.

Let us learn to know the children better, and let us stand up for their rights as firmly as we would stand for our own.

TÉN YEARS AGO.

THE GAZETTE of January, 1904, published a few comments from the New York Herald on the Nurses Registration Law of 1903,—among them this:

There is but one remedy for the protection of the young women who have given up three of the best years of their lives to fit themselves for their profession against the unprincipled and dishonest women who are willing to lend themselves to the monstrous fraud of graduating from a "school of correspondence," and that is registration.

The chief obstacle in the path of making the law of greatest benefit to "trained nurses" is their apathy in registering. Doctors urge that fifty or a hundred nurses cannot make the title of registered nurse of much significance, and that the law should be obligatory. If this were the case people would soon come to expect that every nurse should be a registered nurse, and by this means completely foil the business of those fakirs who foist upon unsuspecting patients women who have been theoretically and not practically trained.

The schools of correspondence and many of the so-called sanitariums are bringing disrepute in the profession of "trained nursing." Like the employment agency, it is to their financial benefit to demand as high a price as possible. They receive a certain commission for obtaining the position and by this means send out a class of nurses utterly incompetent, to whom is paid twenty-five to thirty dollars a week, and who are ignorant of the first principles of the sanitary requisites of modern surg-

Each State has its own separate system growing out of its own separate needs and conditions. But, for the most part, the laws of the different States follow a definite plan, and are designed to accomplish practically the same ends. New York has perhaps a more complete system of laws than any other State in the Union, and it is generally acknowledged that its standards of education are higher than the standards in nearly all the other States. No attempt was made to have the New York law prevent any one who is not registered from practising the art of nursing. Its purpose is to establish the title of "registered nurse," and to prevent any one who is not registered from using that title. The so-called natural nurse will be permitted to ply hen vocation, but by bringing a definite meaning to the title "registered nurse" the public is enabled to differentiate the skilled from the unskilled nurse.

One very material benefit resulting to the public from the passage of the Nurses bill must be the raising of the standard of the training school. When those desiring to enter the profession understand that before they can stand an examination for the title of "registered nurse" they must take a course of training in a training school, maintaining a standard approved by the

Regents of the University of the State of New York, they will be very careful to enter only such schools as meet this requirement. In this way the correspondence schools and the so-called schools conducted by individual physicians, with regard for their own convenience and with little regard for the future of the nurse, will find great difficulty in securing recruits, and the tendency will be to either force them out of business or to compel them to increase their standards until they are schools in fact as well as in name.

When this was published the nurses were writing their prophecy. For the past ten years they have been making history, and any one conversant with this history can tell how accurately the prophecy has been fulfilled.

It is true that the standard of the training school has been raised and many schools have found it to their interest not only to improve their courses of study but to apply for the endorsement of the New York Board of Regents. It is also true that the sub-standard training schools and the correspondence schools have, according to the prediction, improved their courses until today some of them "are schools in fact as well as in name."

And now, how about the prediction that the lowest grade of schools failing to "increase their standards" would be forced "out of business" as a penalty for their lack of proper interest in the advancement of the trained nurse? If many schools have been closed on this account during the past ten years the news has not come to us. On the other hand, we think there has been a steady increase in the business of the substandard schools and the much maligned correspondence schools. Indeed we read complaints and lamentations issuing from the leaders of nursing organizations, the burden of their sorrow being the multiplication of these pests which their legislation was designed to kill or cure.

Need we point out the cause of this partial failure of registration to "make good" in one decade? It must be plain to all friends of good nursing that "apathy in registering," which was the chief obstacle to the success of the law ten years ago, still holds the chief place as a menace to the trained nurse of to-day. It is the apathy of the nurse and not the apathy of the public that still makes our people indifferent to the rival claims of the skilled and the unskilled nurse; many people do

not want to "differentiate" them and to many others the only important difference between nurses is, as it was then, the difference in the dollars that they demand.

Another reason why registration has not done all that was predicted of it is that "the so-called natural nurse" is permitted to "ply her vocation" without registering, precisely and altogether as if nothing had ever happened on this planet to "raise the standard" of nursing. The law ignores her and that is all she asks of the law; she can do the rest without any help, for she has no "standard" waiting to be "raised." It is only her price per diem that she shrewdly raises as she goes on her way free from care!

The nurse of a decade ago thought that by ignoring the sub-standard training school, the correspondence school, and the untrained nurse she could squelch and asphyxiate the whole lot. She tried it. Now she is wondering why these "lesser breeds without the Law" are bothering her so awfully.

Does registration pay? We still hear the question from our latest graduates the same as ever. Yes, if registration registers it surely pays.

Does The Gazette believe in registration? Yes, and consistently, too. We have always advocated the registration of all the nurses, with differentiation right on the pages of the register and on the nurses' certificates. We don't care what you call the non-graduate, under-trained, practical, natural nurse. You may register her as Grade II or Grade III or Group B or C, you may call her assistant, attendant, helper, or any old thing, but people will keep on hiring her just the same and they will persist in calling her NURSE. "It's ENGLISH, ye know."

Our State boards might just as well, while they are about it, register and supervise the untrained nurse by properly framed legislation and business-like methods of inspection. She works. Why shouldn't she be watched, just as much as her superior sister with a diploma?

Whatever you do, O Powers That Be, pray do not ignore the untrained nurse! Enough of the past. It does not pay to ignore anybody in a democracy like ours. They tried to ignore us once, but now even the committees on legislation are agitating the very plans that we proposed years ago.

Some people get ten years wiser in a decade—some less.

EQUALIZING "THE SOCIAL AVAILABILITY OF THE TRAINED NURSE."

This "is one of the most momentous matters with which the profession of nursing has to concern itself." So savs Dr. Richard O. Beard, of the University of Minnesota. He refers to the supplying of nurses to people of moderate means, and he suggests a plan which is noble in that it calls for an unestimated amount of personal and financial sacrifice on the part of trained nurses and then some more from the philanthropic public to make up the deficit. At least, so we understand him to say in his address before the American Medical Association, printed in their Journal, from which we quote. After explaining how he would clear the untrained and under trained nurses off the map by forbidding the graduation of nurses from any but the standard schools, he next considers the problem, how "to equalize the social

availability of the trained nurse," by which we understand that he figures on giving every sick patient an A No. 1 trained nurse and hopes to have his plan working "in an immediate to-morrow" as he says in another place. This would be going some, for sure!

Here is the problem in a nut-shell:

"At present, between that part of the public that can comfortably pay the fair wage of trained nursing and that part of the public which receives or should receive its trained nursing through the medium of organized relief, there are large classes of the people who are altogether unable to meet the expense of such service or who, meeting it, are financially disabled by the drain on their meager resources."

We are just as much interested in the welfare of these people as is the Doctor or anybody else, and so we read his solution of the problem with eagerness. He begins by clearing the arena once more of all inferior beings and leaving the trained

nurse monarch of all she surveys. At least so we understand from the following:

The proposed training and graduation of women of less adequate preparation, to be known as "nursing assistants," etc., and to work for lower wages, is no real solution of this very serious problem.

tion of this very serious problem.

The plan evolved by a committee of the American Hospital Association and presented by Dr. R. H. Babcock of Detroit is an ingenious attempt to meet the economic situation in nursing, but, in my judgment, it is as unpractical as it is undesirable. This plan proposes the creation and recognition of three classes of nurses, to be known as Class A, Class B and Class C; Class A to represent the full-fledged graduate nurse of the standard schools; Class B to be known as that of the "certified nurse," who shall have a single year's training in the schools and who is to be used, theoretically, for minor cases, at a lower wage than that paid to the graduate nurse; and Class C, to include nurses with an uncertain and unrequired quantity of that non-descript and dangerous thing known as experience, who shall be called "house-hold nurses" and shall work for any wage they can get. This report suggests some mechanism for the distribution of these nurses, but it does not outline its origin or functions. Such a mechanism of distribution would probably fail of creation in most communities and would probably fail of operation if it should come to birth.

How would it be possible to label the nurses of Classes A, B and C so that they could be recognized by the people at large? How could the public differentiate between the graduate nurse and the nursing-neo-phyte? It is quite possible that the so-called experienced nurse, who, like the poor, has been always with us, would not need to be tagged. By what species of regulation could sub-standard nurses be confined to a smaller wage? Would they not, with the gathering of experience, compete sooner or later on equal monetary terms with the better-trained graduate nurse? What inducement would there be for them to return to the training-school for additional courses if they could climb by the easy, slow stages of such experience to a better paid practice? Should they be designed for the care of minor cases, for the nursing of which they might prove sufficiently competent, by what mechanism could they be prohibited from the care of cases for which they are not fit?

Would the well-to-do of the public consent to the employment of a nurse of Class B, if they knew her as such, simply because they had a minor case of illness to care for? Would not the system resolve itself into a subdivision of the public in the patronage of nurses according to its ability to pay for them? Would not cheap nursing, in point of quality, prove the inevitable resultant of the creation of nurses of a cheap class?

Surely this is a formidable lot of objections to the "mechanism" proposed by the

mechanics of the American Hospital Association. We would be persuaded already to reject their plan with disgust if—and only if—the alternative proposed by Dr. Beard presented any feasible elements that are likely to be realized in his "immediate to-morrow." In point of generosity he rises to the sublime. He gives the trained nurse everything in sight, only provided she takes good care of it all. Says he:

After all, the ends of social justice are not met by the provision of nurses of grades of training varying with the financial status of the employer. In the emergencies of illness the right and the demand of every man is for the highest available help. The public and the nursing profession alike would be better served by the creation and by the subscriptive or endowed support of some such mechanism as "the nurses' guild," which should provide homes for temporarily unemployed or resting nurses and should maintain an adequate supply of graduates under guaranteed employment for eleven months in each year, to be subject to physician's certified call on a scale of charges graduated to the circumstances of the sick. The profession of nursing must find some such means of standardizing its services for the benefit of society. It must acquire some elasticity of method in its business dealings with the community.

This is certainly an ideal conception—not what you would call a working mechanism just now—and that is why we prefer the plan of the American Hospital Association which appears to us to be dealing with living conditions. Would Dr. Beard start in with his scheme right now or would he wait until the present supply of practical nurses have died a natural death and the trained nurses have increased twenty-fold or an hundred-fold?

The author of this plan inspires it with the highest motives. He tells the trained nurse that hers is a "profession of privilege, but it is the privilege of service." "Freely it has received; it must freely give," and "it must have the will and the wit to adjust itself to all sorts and conditions of men—to meet and to fulfill every form of social demand," He says these things grandly and every true spirit will acknowledge his motive as the one by which nurses should be actuated. But he is asking too much of his ideal nurse! Even if there were enough trained nurses to carry out his scheme of service, it is not right that they should be called on to work for less than a living wage; some of them have relatives dependent on their earnings. It is not right that the charitably disposed members of the community should be called on to eke out the living of this army of trained nurses, whom they help to train in endowed hospitals and schools. Why is it not right? Because the service of which we are thinking is a service rendered to self-sustaining and self-respecting people who do not ask us for charity but merely for such help as they can afford to hire people with moderate incomes, who live in small homes, dress plainly, eat moderately, live frugally and pay their bills, people who would have the best if they could afford it but who ask and accept no favors if only they can enjoy life's comforts without its luxuries. One of these luxuries is the trained nurse.

If it is worth while to preserve the health of this large class is it not worth while at the same time to preserve their social independence, their self-respect, and not to hand them as a gift that which they would prefer to buy like other people?

Then there are the partially trained and "experienced nurses" who are in the same economic class—the Bs and Cs of the Hospital Association's plan which was fully described in The Gazette for last December. They are not first-class, but they offer their services at reasonable prices to people who cannot afford the best. Let us have some plan of bringing these nurses forward and making their services useful and safe by a well-organized system of supervision and instruction. This will give the high-minded,

trained nurse ample opportunity for exercising her skill and her patience, and will multiply her service to humanity many fold through the help that she gives in teaching others to help.

We cannot pass Dr. Beard's dignified presentation of this subject without another tribute to his high ideals, but we feel that in effect he is too severe with the trained nurse and the charitable public and too easy on the man of moderate means. He has not outlined any clear plan for eliminating the substandard nurse. We therefore prefer at present and in the "immediate to-morrow" to keep the untrained nurse busy, but to put her and her work under the supervision of the trained nurse—thereby teaching both to be more humble and more useful. We have long been impatient with the trained nurse because she does not realize this opportunity for service and make the We hear a great many fine most of it. things now-and some of them we say ourselves—about the teaching functions of the nurse. The nurse as a teacher! It is a splendid theme.

Well, in the course of time the nurse has been called upon to teach almost everybody, with the exception of her poor, despised sister, the untrained nurse. Isn't it about time for her to begin this good work, on her right hand and on her left, for the benefit of a long-suffering public? By this means the trained nurse would certainly help to equalize her "social availability."

"PSEUDO - ATYPICAL CHILDREN FROM A PHYSICIAN'S STANDPOINT,"

By J. Hervey Buchanan, Plainfield, N. J.*

I am to speak on what I may term pseudo-atypical children who are apparently backward, whom you meet every day and at first impression set down not as mentally deficient but as mentally slow; who have intelligence, horse sense and ability, but who lag behind in class, and like the slowest ship in the fleet hamper its onward progress. Children who slowly grasp their teaching, whose dwarfed mental growth is dwarfed, though correct so

far as they get it. These are the children who need our discernment, who must be studied as to just where lies the difficulty in acquiring instruction, who in justice to themselves must be placed under care to remove the causative defects, and who must be differentiated from the truly atypical children whose mentality is at fault. And I shall try and explain some of the causes producing this pseudo-atypical condition, to enable you to detect them, and express to you my own idea of the pseudo-atypical and atypical child. And in doing so I want to discuss some of the fundamental principles of existence.

^{*}Lecture given before the Training Course for the Teachers of Exceptional Children, under the auspices of the National Association for the Study and Education of Exceptional Children, Plainfield, N. J.

All life is the expression of stimulus and reaction—cause and effect, if you choose. You and I in every phase of our existence are simply examples of activity engendered by impressions received from without. And the simplest expression of this is the typical reflex of your physiological studies. Thus if I sit in a chair and let my leg hang limply over its edge, a sudden light tap on the tendon below the knee cap will cause it suddenly to kick up. This is the tendon reflex of the knee or knee-jerk; and a highly important symptom in certain cases. Now what has happened is, that the area over the tendon contains many terminal fibres of nerves leading to the spinal cord. Being struck or stimulated suddenly, they send that impression up along the nerveleading to the spinal cord and to certain groups of cells known as centers. this transmitted stimulus is received by the sensory cells and transmitted to the motor cells which change it to a motor impulse; and back along the motor nerves goes an impulse or impulses that cause the muscles to contract suddenly, and as they contract, cause the limb to kick. And this same principle holds good everywhere. The heart beats because its muscle fibres contract and act from motor impulses that are changed into sensory impulses from the passage and content of the blood itself. Digestive juices appear in the stomach because the digestion of food gives a stimulus that passes to a proper centre and comes back in a motor impulse that causes its cells to secrete. And so for every act of life, there is a reflex essential, simple or compound, upon which its performance depends. So now to reduce a reflex to its component parts we find that these are five, to wit: An area of sensory reception; a transmitting link or avenue known as the afferent or sensory pathway; a governing centre that receives the sensory impulse and transmits it to a motor impulse; a second transmitting link, known as the efferent or motor pathway; and finally the motor terminal where the impulse sent back finds its expression in actual work. It needs no discussion to prove that the perfect action of this simple reflex—and compound reflexes are but combinations of simple reflexesdemands for its performance a perfectly balanced and normal action. In short, it must be typical to produce a typical result. If the sensory receptive area be lost, no impulse is received and no action results. If the afferent pathway be cut, no action takes

place and if damaged, action is correspondingly perverted. The same facts hold for the other phases of reflex activity, so that here you may begin to get an inkling of why certain processes rated as normal show changes as the result of diseased factors operating in the body. Now what holds true in the strictly physical sphere likewise holds true in the psychical being. mind becomes active and trained through stimulations transmitted and transmuted in a similar manner. Just what the higher phases are I am not enough of a psychologist to determine, if indeed anyone is; but this we do know, that the brain has countless centres that receive impulses from sensory areas, and the special senses along special pathways; that these impulses are transmuted into either mental photographs or intelligent action through this reflex principle vastly complicated by cross connections and associational paths. And education as we term it is largely the continued reception and storage of these countless sensory stimuli transmitted along these receptive paths. You will see why I have taken this subject up in this way, when I state that to my mind the difference between the typical and the atypical child is this: namely, that in the typical child the whole reflex chain is perfect, in the atypical child the last phases are imperfect. While both may have equal sensory receptive capacity and may transmit impressions equally, the typical child shows the typical reactions while the atypical child does not. In other words it is a difference in action or ability for action in the last phase of the reflexes, that makes the distinction as I view And right here lies my idea of the pseudo-atypical child, namely, one in whom the final phase is typical, but whose receptive phases are impaired—in other words action or results are atypical, because stimuli are not properly received or trans-These are the cases where effort must be made to detect what is lacking or wrong in sensory area or pathway and remedy it. Believe me it sometimes takes a lot of keen intuition to do it. Often has a child been condemned and scolded for backwardness when the fault lay wholly in the sensory phases, which delayed or distorted stimuli to the terminal phases that were absolutely perfect in every way. You cannot expect a child handicapped by such factors to acquire proper instruction. Of course in this view I am making three distinctive classes, but I need not stop to add

that an atypical child may be handicapped by the same sensory failures as the pseudoatypical. Such cases are common and add greatly to the difficulty of treatment and study.

But to resume, What are some of the common causes operating in the case of the pseudo-atypical child? I shall make no attempt to classify on the basis of relative occurrence and importance, but simply to note the common conditions that are daily seen, with some hints as to their detection. First of these is deafness. This condition is not uncommon. When very marked it is evident, as a rule, to casual observation. There is a class of deafness, however, that is not so evident and may remain undiscovered unless careful observation is brought to bear. Such cases, for example, will hear only a high sharp pitched or a low pitched tone and will gather information in ordinary voice from unconscious lip reading. Some cases will be just sluggish enough to hear as a confusing mass of words any conversation or speech that is not slow and distinct, and pride will not allow the unfortunate one to ask repetition; thus but part of the stimulus will be active. Again, deafness with or without these peculiarities may be confined to one ear and not the other; and the good ear being out of receptive line may be obtuned to that extent, so interference with the Eustachian canal by pressure of enlarged tonsils or (turgescent) adenoids may cause difficulty in hearing more or less lasting. And finally inflammatory diseases of the ear may cause or have left sufficient thickening of the essential membranes to modify sound interpretation, especially if there be associated with it a buzzing or "roaring" in the head. And you can readily see how in such conditions stimuli in this direction would be so altered as to send an impaired, and for purposes of education, a misleading impression to the brain.

As proof I will cite a case in my own practice. I have a young child, say three years old, who to my mind is a pseudo-atypical child. He is a puzzle, in a way, and yet not so much of a puzzle either when you analyze him. He is naturally bright but he will not talk, or would not till recently and the secret lies in a congenital weakness of hearing. He would notice a sharp sound and look up. Ordinary conversation he paid no attention to. What has been the result? Exactly this—no effort to talk other than an animal

squeal at times, because he has had no proper stimulus through the auditory pathways to make any impression on his lost phases, as to names of things and the ordinary phrases of conversation. To put it in plain English, he couldn't be taught because he did not hear. He transmitted no proper sensory stimuli to act on his terminal phases and evoke the reflex actions, memory-pictures and associations. yet those terminal phases are normal and the child in my view is therefore not atypical, but pseudo-atypical; and the proof lies here. I have had two specialists examine the child and both reported him practically deaf and advised removal of adenoids and tonsils to clear the Eustachian tubes from obstruction. Such was done and since then . there has been improvement and the child notices sounds better, is acquiring a vocabulary, and is responding to auditory stimuli in a way to show that this and this alone was the cause of his backwardness. how are you going to determine such conditions? In the first place by eliminating other factors as possibilities, and secondly by trials of hearing when the child does not expect it. Questions are asked in varying tones and pitches of the voice and without the child observing the lips. Inquire as to the history of the ears—has he had or does he have earache or running ears? Has he ever had measles or scarlet fever? Has he ever been injured? Has he had any very prolonged treatment for malaria or Through such observation rheumatism? you will not make a mistake, especially if in other respects, in activity, brightness of eyes, good healthy looking skin, etc., he seems normal. And having your suspicions verified by repeated tests, report it to your school physician, or if none be available to the family that action may be taken to remedy it and remove if possible the obstacle to the child's mental growth, which is his

Another most important avenue of sensory reception is the sight. Boston isn't the only place where spectacles are or should be in vogue. There is a very high percentage of defective sight in young children, sad as the fact is. Such cases sometimes are very baffling, especially if a routine examination of the children is not practised. The principal troubles are far sight, near sight, astigmatism, and eye-strain. Many a child with far sight can see the blackboard clearly, but cannot clearly read or discern the smaller print of his text

book. On the other hand, many a child with near sight can see books clearly, but cannot read the board. I speak on this phase feelingly, for it was my own personal experience. My public school days were of little use to me, since I learned parrot-like from my books and could not take in blackboard demonstrations. I did not know and my parents did not know and the teacher did not know, why I was so dumb—certainly my ancestry had many able men in it in Scottish history and I never did know why I was backward till chance gave the solution and a pair of glasses put me in the whole world instead of the half only of which I had been cognizant. too, astigmatism with its varied lens curvatures in different axes gives a distorted view and to that extent impairs sensory reception. And again numbers of children can by straining the eyes have fair visual capacity and yet so try the eye by continued effort that the strain will cause headaches, fullness of the brain and local congestions sufficient to alter the stimuli presented and to some extent vitiate their action. And so with various organic lesions, deposits and the like, though fortunately these are generally recognized and corrected before much influence has been ex-And how are you going to estimate eye trouble? Exactly as in troubles with the ear, by observation. Test the child for far sight and near sight by the board and book, or better still by a card of eye type. Test roughly for astigmatism by a staff held upright at different angles, testing each eye separately. Watch for eye strain by observing whether the scholar has to squint. Does he frown? Does he shade his eyes at work? Do the whites redden, the lids inflame or water? Does he have headache, especially after some close application of the eyes; and if so, is it in the temples or in the occipital regions? Do the spaces under the eyes puff and swell? If any of these symptoms are persistent, you may rest assured that however well up he may be, he is getting results only by effort which in a normal condition would make him exceptionally bright. Defective eye sight and hearing have assigned the stigmata of backwardness and slowness to many a child whose intellect was absolutely normal, but whose stimuli were lessened or perverted. Taste, smell and feeling have less bearing on the subject of the pseudoatypical child than the other special senses;

yet they do have some, though I shall take no time in discussing them.

Leaving the special senses, I pass to very common and potent factors in the interference with the education of the pseudo-atypical child. I refer to enlarged adenoids and The time is not so far distant tonsils. when such a thing as operation for enlarged adenoids and tonsils was unheard Even to-day many parents will tell their physician that they do not consider it necessary—they never had such things when they were young. Fortunately, however, the opposite is the rule, and in every community there are so many marked cases of improvement following the removal of these parts that parents now often seek to have it done. In fact, I think it is overdone at times. What then are adenoid growths and what are tonsils? The term adenoid growth" or "adenoid" means gland-like, and is used to designate a soft, spongy, fluffy tissue of cells like a lymph gland, that arises and springs from the mucous membrane of the pharynx and particularly the nasopharynx. Of no functional use, like a mass of soft warts in the hand, they cause trouble by bulk and interference rather than by any functional disturbance. Rarely can they be seen from the mouth, and their diagnosis depends on the general symptom-complex and the exploring finger. As a rule, when large enough to give trouble, they do so: either by closing the pharyngeal end of the Eustachian tube and so interfering with the pulsations of air from the ear drum, as a kettle drum is muffled when you place your finger over its vent; or they block the openings of the nostrils, either completely stopping or seriously impeding the function of nasal respiration; or they invite a catarrhal condition and favor the lodgment and proliferation of pus-infection and the formation of a continuous stream of muco-pus. In any of these three ways (and they may all be present at once) the patient has a constant sense of annoyance, he feels stuffed up, his head is not clear and his brain works poorly. Because of the distraction caused and the more or less congested state of the brain and the pathways to and from it a lessened or perverted mentality results, though the mechanism be perfect.

What I have to say of adenoids is true of enlarged tonsils, with some minor modifications. Now how are you going to diag-

nose this trouble in your pupils? Enlarged tonsils are easily seen and recognized and attention is often called to them by frequent sore throats, gulping in swallowing, enlarged glands in the neck and a thick voice. Inspection will always verify your suspicions if you keep the tongue well depressed. On the other hand, a very large mass of adenoids will do their damage and yet show nothing through the mouth. Here you will have to seek a physician to corroborate your suspicions if in a backward child you find some or many of the following conditions: Persistent mouth breathing, more or less complete. A peculiar line from the angle of the nose to the angle of the lips giving a drawn look to the face. Possibly an irritative cough, more or less spasmodic, and a tendency to clear the throat and hack. A discharge from one or both nostrils. A tendency to nose bleeding with little or no provocation and a general apathetic look of the child in general. And if you feel below and back of the ears you may find in corroboration a chain of swollen hard glands, not large, nor painful-for adenoids very seldom cause any pain. If you have a backward child with this symptom-complex, refer it to a competent physician, who will verify the diagnosis by a

digital examination, and if up to date will advise their removal. Many a dumb child has been proven more than ordinarily bright by the comparatively simple and safe operation of removal. And what I have written applies with equal force to obstructive conditions in any of the head passages, the effect produced being rather more than proportionate to the disturbing cause. I know of no way of forcibly illustrating the facts I have laid down better than to ask you if you care to imagine yourselves as trying to study with your head stopped up with a cold. You simply can't do it. You will get part and lose part, and more likely get less and lose more the harder you try. I am, I think, safe in saying you would all be highly indignant to be classed as dumb for not doing what your inmost conscience tells you to be an impossibility under such conditions. And yet, in the past, thousands of children have been dubbed dumb because they were handicapped in varying degree by exactly the same physical hindrance in a chronic type that the cold in the head gives in an acute form. Such children are pseudoatypical in the truest sense—the last and reflex phases are sound, but they are thwarted in their action by the links ahead. (To be continued.)

LEGISLATION FOR NURSES IN NEW YORK STATE. By N. D.

On Nov. 13, 1913, Mrs. Stevenson, the President of the New York Nurses' Association, gave a very interesting talk in regard to the proposed new law for nurses to about 150 nurses at the University of Buffalo.

Mrs. Stevenson said that the problem of the nurse may be considered from the educational, ethical and economic point of view. As far as the ethics are concerned the needs of the patients, and not their bank account, should determine the kind of nursing. Today the rich and the poor get the best care and treatment; only a few of the other classes receiving adequate treatment.

The economic side is not the province of the nurse, but of the state. The state to-day takes care of its dependent poor and unfortunate, and it does not send the poor nurse or the correspondence school nurse to care for them; it demands and accepts only nurses of the best class.

Nursing as an occupation is as old as there is any history of the world. The generic meaning of the word nurse signifies the care and nourishment of the sick and injured, and any woman so inclined could do any kind of nursing. In the past, and before nursing made the rapid strides it has in the last 25 years, any woman was capable of the care of the sick; but the old order of things has changed.

Florence Nightingale is mostly commended for the work she did in the Crimean War; but it is the constructive work she did in establishing a Training School with the money given her for service that should be of most interest to nurses, and it is through the training school that a gateway will be opened to the elevating of the nursing profession.

There are some poor nurses who have graduated from a Registered Training School and are registered. There are also

some very good nurses who have not grad-uated from any Training School. These uated from any Training School. women would be given a definite place under the waiver, and in the future under the new law it would be impossible for such conditions to exist. It must be remembered that it is the women of this profession who have raised the status of nursing above the Sairy Gamp type of nurse, and it is the women who must work to keep it up and to keep pace with the other professions. It is no more than fair to the woman who gives so much of her time and energy, and who makes so many sacrifices to spend two or three years in a Training School, to protect her and give her a definite place and position. The ultimate aim of all professions is to establish a definite educational standard, and why should the nurse be ignored in this regard? It is certainly not because it is not needed, for wherever they are placed the nurses are carrying heavy responsibilities.

At the New York State Nurses' Meeting held at Niagara Falls in October, Dr. Schaefer of the Buffalo Health Department paid high tribute to the school nurses of Buffalo, and said that he hoped that the end of another year would see 25 public

school nurses in his city.

The public health law, which goes into effect soon, will give the Commissioners of Health of any part of the state power to employ Public Health nurses, as is necessary for the poor. They will work under the health officers. Nurses who occupy a position of such interest to the public must be women who are graduated from a Registered Training School. Their duty is to teach as well as to care for, and they must be from a school that is under some uniform control. If the public poor are so well protected, it seems only fair that the general public should have some protection, As it is to-day, there is no way to too. differentiate between a correspondence school nurse and a graduate of a first-class hospital until, in many cases, it is too late. Even if the patient suffers no physical harm, the profession of nursing, in most cases, has received a setback that it will take several competent nurses and much time to counteract. If they do not need a trained nurse -just an attendant—why could not these women care for this class of patients as attendants and not as trained nurses?

As conditions are to-day anyone with or without a training of any kind can go out, call herself a nurse and demand the wages of a trained nurse, and the general public has no means of knowing anything of her ability, and no redress.

When the first nurses' bill was agitated it was suggested by many prominent people that a very broad bill be introduced and tried for a few years—the same as the bill for physicians, public accountants, etc.; then after a practical application the weak points could be determined and the bill changed to meet the necessary demands. It was felt at this time that the schools should be under some central head, and after due thought and deliberation it was decided that no better selection could be made than the Regents of the state, who controlled all other educational institutions. On the advice of the Regents the bill of 1902 demanded that all nurses should be graduated from a registered school which should be under supervision, as skill and knowledge in this case meant life or death.

The Regents determine the weakness of the statute, and to-day it is permissiblenot obligatory or mandatory. It is felt that now, for the good of the profession and of the Training School, the time has come to give greater protection. In 1911 Dr. Darling recommended that registration be made compulsory, and in 1912, at the Utica meeting of the State Nurses' Association, this question came up. A committee was appointed and an amendment to the present bill was drawn up. This was submitted to and approved by the Regents and the Association. This bill has nothing to do with the educational requirements of the prospective pupil, which will remain as they are and have been. The new proposed law will affect them only indirectly by bringing to our hospitals more pupils, and in many instances a better class, as it will close the doors of the schools which are now turning out thousands of so-called graduate nurses every year, or will allow them to send them out only as attendants, with no power to call themselves nurses; and they will have had a training that fits them to be attendants, and as such will find a recognized place in the care of the sick and helpless. There is a place for both; the difference would be in the kind of service and the compensation.

There was much discussion as to the waiver, many considering it too broad, but it was left as first submitted—to protect and include all women who are now in the work—feeling that the main object was to protect the profession of the future, in-

sisting that the nurses of the future take a course in a Registered Hospital.

This new bill does not prohibit any person caring for the sick, but does prohibit their caring for them as nurses, forcing them to care for them under their true name of attendants. The waiver in the bill is very broad and reads as follows: "A waiver will provide for the registration of all who are now engaged in nursing, without examination, except for practical nurses who have had less than 5 years' experience, such nurses being required to pass a practical examination only, this waiver to be in effect for three years from the passage of this act."

The opposition to the word nurse was bitter, but it is felt that that is the vital point. It was said many times that this was a generic word and has always been used. This is true, but in the old days there was no thought or means of training women, and if this is true of the word Nurse, is it not also true of the word Doctor, Physician, Pharmacist, etc.? Conditions of everything have changed and advancements of every kind have been made—why should not the nursing profession advance and avail itself of the right to have a definite standard and place, and who is better able to determine what that place shall be than the women who have

been in the profession for years and the state education department? After the bill of 1913 had been brought up many times and all the opposition seemed concentrated on the word Nurse, it was decided to amend that part to read Registered, Graduated, Trained, or Certified nurse. All opposition of correspondence schools was immediately withdrawn and it took a member of the Legislature only a moment to point out that the word Qualified could just as well be used by the schools. So while it was felt that the amended bill was of little benefit, an endeavor was made to have it passed, as it would act as an entering wedge toward further legislation.

The bill of 1913 was a question simple and momentous: "Who is a nurse?" and "What is our obligation to the sick?" Education is essential, and the people must be educated to demand only the educated nurse as they were educated to demand only the educated physician, pharmacist, dentist, lawyer atc

lawyer, etc.

At the close of the meeting a rising vote of thanks was tendered Mrs. Stevenson for making the situation so clear. Some questions were asked and answered, the principal one being in regard to the penalty attached, which was read as it had been presented in the bill. All nurses present promised to help as much as possible when the bill is again presented.

ENGLISH NURSES SCARCE AND OVERWORKED.

THE British Journal of Nursing calls attention to these facts:

It was stated by a nurse at inquests held at Camberwell recently on two aged persons at Newington Workhouse, that there was only one nurse at that institution to 112 aged patients.

In returning verdicts of "Accidental Death," the jury added the rider: "We consider that there should be more nurses for the elderly inmates of Newington Workhouse."

Is it a wonder that we so constantly hear

of overstrain and a shortage of nurses? Many Boards of Guardians are at their wits' end for efficient nurses. They simply can't be got. We have spoken with several country infirmary nurses recently. The following are the reasons advanced: Monotony of work; impossibility of doing the work thoroughly for lack of sufficient help; bad tone and lack of discipline in wards; longing for change; seven-day working week; tired out and dispirited; down grade of nursing profession; abuse of women in newspapers; and bother about the Insurance Act.

"He's got the foot and mouth disease."
"Never heard of it; what's it like?" "Whenever he opens his mouth, he puts his foot in it."—Houston Post.

Some of our farmers have commenced butchering hogs, Mr. J. O. Polly and Mr. U. M. Girder being among the number.—Adair County (Ky.) News.



HOW TO ENJOY YOUR MIND.

By Dr. Frank Crane.

THERE is one source of pleasure most of us neglect. It is always with us, always "on top," so to speak, and if we knew the art of using it rightly it would save us in many ways.

I mean one's own thoughts.

How much downright enjoyment do you get from your own thoughts? As a matter of fact, are you not in the habit of running away from them? When you are left to your own resources are you not bored, wretched and lonesome? Can you appreciate the feeling in the old verse of Edward Dyer?

"My mind to me a kingdom is; Such present joys therein I find, That it excels all other bliss

That earth affords or grows by kind."... How extensive is the thought-realm! The empire of Great Britain "upon which the sun never sets," is a small spot compared to it. For my thoughts embrace not only this world but the star-worlds, they roam heaven and hell, they are in Patagonia, Peru, ancient Rome and modern Chicago.

How quick and supple they are! They can beat Puck in his flight around the world. I can think of Julius Cæsar, and in a trice he can be made to disappear and be replaced by Li Hung Chang. . . .

Isn't it singular that a creature with a power like this should get world-weary and sigh for something to amuse him? Is it not curious that we so dread to be left alone with our thoughts? We complain of being left alone with this magician, miracleworker, cinematograph, phonograph and winged Mercury! It must be that discontent is inground in human nature. . . .

"Thoughts are things," they are realities.
... When there is no mental perception of any object, the object itself does not exist—for us. Without the presence of the thinker the world is dead, even uncreated. Without the hearing ear Niagara does not roar, nor the sea boom upon the sands, nor birds cry in the forest. Were there no seeing eye there would be no colored sunset, no redness of the rose, no beauty in the cheek and lip of youth. With no sense of smell there would cease to exist the whole world of perfume, the odors of the lilac

and jasmine would be no more, the aroma of coffee and savory food would vanish.

For it is only as human thoughts that all these things have their being. . . .

If you find yourself with an idle hour, suppose you are waiting for a train, or are left alone in the house, or are on a solitary journey, or in any other way have "nothing to do, nothing to read and nothing to play," then deliberately set to work observing your thoughts. Play with them, study them.

Note, for example, how one thought brings on another, the associative or suggestive power of one over another. Try to reverse the process, and see how you came to be thinking of the present object. You are thinking of your broken eye-glass; a few minutes ago it was the emperor of Japan; how did you come to go from one to the other? You discover the process was this: You remember seeing a man opposite you in the car wiping his glasses, which called to your mind the broken glass in its case in your pocket; why did you remember this man? Because he looked like your neighbor Smith; Smith was suggested by a joke some one told you concerning the many Smiths in the city directory; this some one was your uncle David; he is a teacher in a university; the last time you were there you saw some Japanese students; these students were called to your mind by reading about the death of the Japanese emperor; and so the curious bridge was built from the oriental monarch to the broken eye-glass.

Again, practice controlling your thoughts, driving them in some certain direction.

Lay down certain principles to govern your thinking, and stick to them. For instance, determine to drop, like a hot poker, any thought that makes you miserable, weak, depressed, wicked or afraid. . . . Welcome the flower, angel, prosperity, success thoughts.

You have no conception how much this has to do with your health, fortune and happiness. Do you know that just by learning the art of thought-choosing and thought-dodging you can work wonders?

As to health, the power of mental suggestion is well known. By stern control of one's thoughts, keeping them off the subject, one can cure nine diseases out of ten.

one's thoughts, keeping them off the subject, one can cure nine diseases out of ten. There are some who make this law a part of their religion, and it works well. Any intelligent physician will tell you it is founded on fact.

On the contrary, if you have a slight ailment, and allow black, fearsome and alarming thoughts to flock to it, like evil birds, you are pretty sure to develop serious trouble, which by a little sensible thought-control might have been avoided.

The same law holds good in your dealings with people. Think success-thoughts and you are ten times likelier to succeed than if you harbor failure thoughts. Allow your mind to run upon how awkward, ignorant, small, weak and poor you are, and people will walk on you as naturally as if you were a door-mat.

So if you wish to be graceful, let images of grace, of graceful people, deeds and words, circulate in your mind. Study the kind of persons you admire, in actual society and in books, and recall them often and you will grow to be like them.

It is your thought of yourself that defeats you. It is your thoughts that make

you or undo you.

Foul and wicked thoughts nursed in the mind poison the whole character, and if you can only sit and think of kindness, courage and beauty, you are doing much to help along the world.

No thought is ever lost. The dye of it stains the mind.—Woman's World.

Questions and Answers.

The following answers are not "official." They are prepared for the editor.

University of the State of New York, 20th Nurses Examination.

MATERIA MEDICA.

Wednesday, June 25, 1913—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. What is the dose of quinin when used as a tonic?

Ans. From 1 to 4 grains.

2. What are the first symptoms of over use of iodoform?

Ans. Headache, anorexia, insomnia, rise of temperature, feeble and rapid pulse, restlessness, passing on to the "iodin rash" on face and limbs, stupor, retention of urine, delirium, collapse.

- 3. What is the difference between a solution and a tincture? Which is the stronger?
- Ans. A tincture contains alcohol as a solvent, and is weaker than the corresponding fluid extract, or solution.
- 4. Define (a) motor excitants, (b) cerebral stimulants, (c) antispasmodics.

- Ans. (a) Drugs or measures that arouse muscular activity. (b) Drugs or agents which stimulate activity of the brain. (c) Agents allaying or relieving convulsions or spasmodic pains.
- 5. Write the table of apothecaries' weight.

Ans.

Apothecaries' or Troy Weight.

- 6. State the dose of Fowler's solution of arsenic. When should it be given?
- Ans. Two drops, gradually increased to 30 or 40 drops. After meals.
- 7. Why do solutions need to be frequently renewed?

Ans. Slow chemical changes may produce clouding and precipitation. Evaporation changes strength of solutions.

- 8. What change occurs in tinctures and fluid extracts if they are allowed to become old?
- The menstruum evaporates, chang-Ans. ing the strength of the solution. With the loss of alcohol from a tincture there is a loss of its preservative action and the remaining substances undergo more or less decomposition.
- 9. Explain the meaning of "drug idiosyncrasy.
- Ans. A peculiar condition of the patient by reason of which the usual standard doses of a drug produce a much greater or a much diminished effect as compared with the same dose administered to the average person.
- 10. Mention a marked feature of lead poisoning.
- A blue line on the free edges of the gums.

11. What are the active ingredients of Seidlitz powders?

Ans. Rochelle salt, bicarbonate of so-

dium and tartaric acid.

12. If the adult dose of a drug is 12 grains, what is the dose for a child 4 years old?

Ans. Three grains.

13. How many grains to the ounce are required to make a 1% solution?

Ans. Five, or more exactly, 4.8.

14. Why is atropin sometimes given with morphin?

Ans. Atropin antagonizes the effects of

morphin on respiration and heart.

15. Give the meaning of each of the following abbreviations: (a) ung., (b) O., (c) s. o. s., (d) gtt., (e) pulv.

Ans. (a) Unguentum, or ointment. (b) Octarius, or pint. (c) If necessary. Gutta or guttae, drop or drops. (e) Pulvis, or powder.

OBSTETRIC NURSING.

FOR FEMALE NURSES

Wednesday, June 25, 1913—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 cred-Papers entitled to 75 or more credits will be accepted.

1. Compare the true pelvis with false

pelvis.

The false pelvis is the upper or reater pelvis, lying above the ilio-pectineal line; the true pelvis is the lower or lesser pelvis, lying below this line.

2. Name the organs in the pelvic cavity and show by words or diagram their rela-

tive position.

Ans. Beginning with the ventral side, the bladder and urethra with the lower portions of the ureters, the uterus with the two Fallopian tubes stretching to the right and left sides of the pelvis and the two ovaries situated below the extremities of the tubes, the rectum traversing the dorsal portion of the pelvis, the vagina enclosing the lower part of the uterus and lying on the ventral side of the rectum.

What is the advantage of the sutures and fontanels as found in the skull of

the fetus?

They allow a certain amount of crowding and overlapping of the cranial bones, thus permitting the "moulding" of the head during labor.

4. Describe the structure and the function of the umbilical cord.

A long cord-like organ, irregularly roundish in cross-section, enveloped in a sheath from the amnion, and enclosing a gelatinous substance called Wharton's jelly, in which are embedded the umbilical vein and two umbilical arteries, with vestiges of certain earlier fetal structures. Its function is to communicate between the placenta and the fetus.

What are the nurse's responsibilities in regard to the cord from the time it is severed till it falls off?

Ans. Observe all the rules of asepsis and antisepsis that would be followed in the case of any other wound. Apply the dressing ordered by the doctor, and avoid contaminating it with the urine or feces, or with the water used in the bath. If dressings become soiled or badly soaked they should be renewed.

What advantages might be gained from the application of a breast binder?

Ans. It is believed by some that it checks the secretion of milk. It is recommended also in the early stages of mastitis.

What advantages may be gained from the application of an abdominal binder?

Ans. It is claimed by some that it favors the involution of the uterus and helps to restore the figure to its former proportions. Before term it may help to sustain the gravid uterus and relieve the patient from bearing-down pains and similar inconvenience.

8. Define fetus, viability, lactation, involution.

Ans. The child in utero after the end of the third month. Ability of the infant to live after birth. The secretion of milk, or the period during which milk secretion continues. The retrogressive changes by which the uterus after labor is restored to its usual weight and condition.

9. What may the nurse do for the relief of varicose veins during pregnancy?

Ans. Regulate the bowels. Keep patient sitting or, better, lying down, as much of the time as is convenient. Apply elastic stocking or flannel bandage, not too tightly. Provide a compress and bandage for emergency use in case of ruptured vein, and show patient how to apply them.

10. Give three characteristic signs of the beginning of the second stage of labor.

Ans. Rupture of the bag of waters. Bearing-down pains, with strong action of abdominal muscles. Increased pressure on the rectum, with stretching of the perineum.

11. What may the nurse do for the relief of cramps in the thighs during labor?

Ans. Straighten the legs and rub them briskly.

12. Why is crying necessary for an infant immediately after birth?

Ans. It shows the child's reflex nervous mechanism is in working order, that the child is breathing deeply, and it helps to clear the air passages of mucus and liquor amnii.

13. How should the soiled napkins of an infant be cared for?

Ans. They should be carefully inspected by the nurse and she should be prepared to report to the doctor as to the number of stools per day and the intervals at which they are voided, their quantity, consistency, color, odor, presence or absence of blood, and any abnormal or unusual characteristics. In some cases the napkins are to be saved for the doctor's inspection. Finally, they must be thoroughly washed and rinsed until clean, and well dried before using again.

14-15. Discuss the nursing care of a case of eclampsia as regards (a) quiet,

(b) nourishment, (c) elimination.

Ans. (a) Patient should be kept as quiet as possible, and all causes of excitement or alarm should be carefully guarded against. No one should be in the sick room except those actually needed to attend the patient. (b) A strict milk diet is usually given while there is albumin in the urine, or as long as edema of limbs and face persists. Nothing should be given by the mouth while the patient is unconscious. (c) Elimination must be thorough and practically continuous until the case is relieved. It is secured by free use of cathartics, hot baths and wet packs, diuretics, and sometimes salt solution by hypodermoclysis. The patient is usually encouraged to drink water freely.

University of the State of New York, 20th Nurses' Examination.

GENITO-URINARY NURSING.

FOR MALE NURSES.

Wednesday, June 25, 1913-9.15 a.m. to 12.15 p.m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. What is the first manifestation of syphilis?

2. How would you give a mercurial vapor bath?

3. What is strangury?

4. Define bubo.

5. What care would you give a patient after circumcision?

- 6. Define genito-urinary.
- 7. What is inflammation of the bladder called?
- 8. What is loss of power to control the voiding of urine called?
- 9. What important point should the nurse remember when caring for a patient who wears a truss for the support of hernia, but who is not confined to the bed?
 - 10. Locate the perineum.

11. What preparation would you make

for an operation on the bladder?

12. If a hemorrhoidal hemorrhage occurs what should the nurse do till the arrival of the doctor?

13. What is the incubation period of gonorrhea?

14. Define chancroid.

15. By what symptoms is gonorrhea characterized?

University of the State of New York, 20th Nurses' Examination. DIETETICS.

Thursday, June 26, 1913—9.15 a.m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

- 1. Define (a) chyme), (b) chyle.
- 2. At what age may a healthy child begin to digest starches?
- 3. In what organs and by what enzymes are starches digested?
- 4. Mention three results obtained by the cooking of food.
- 5. Give the freezing and the boiling point of (a) the Fahrenheit thermometer, (b) the centigrade thermometer.
- 6. Make a list of five tissue-building foods.
- 7. What does the term "top milk" mean?

- 8. When 10% top milk is used, what is the relative proportion of fat to proteid?
 - 9. Outline the daily care of an ice box.
- 10. Contrast the cooking of meat in making broth and in broiling.
- 11. Describe the care of milk in the home. Give reasons for your answer.
- 12. How would you make funket? State the source of rennet.
- 13. Give the general rule for making cream vegetable soups.
- 14. Tell how you would make cocoa and give your reasons for thus making it.
- 15. Name two diseases in which carbohydrate food is limited.

Have your answers to these questions ready for comparison with the answers to be given in a later number of THE GAZETTE.

TECHNICALITIES.

THE ODOR OF IODOFORM.—The odor of iodoform may be removed from the hands by the application of mustard. Moisten the hands with cold water, place a small quantity of dry mustard in the palm, rub it well over the hands, and wash off with soap and water. The odor can be removed from utensils in the same way, with the exception that the mustard paste should be allowed to remain on for several hours; a solution of sodium hydroxide will also answer the purpose.—The Hospital.

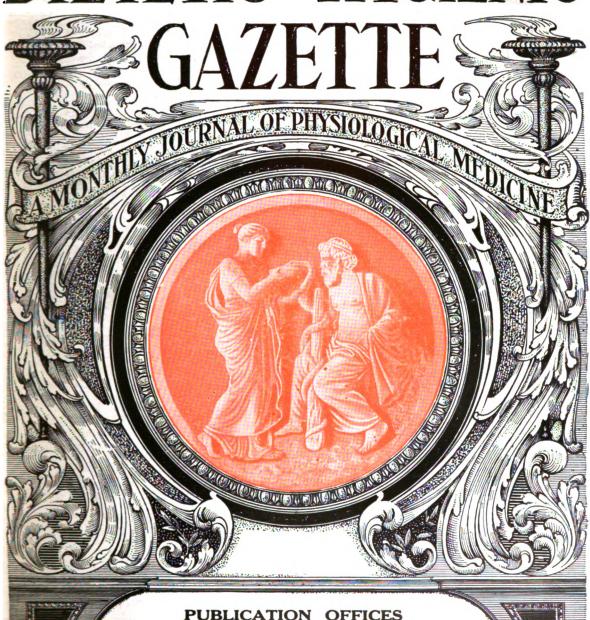
MOVING PICTURE MICROBES.—Conditions found in the average small theater of to-day are such as make these popular places of assemblage perfect incubators for and disseminators of disease germs. Lack of ventilation, which is the common defect found, means an air content fouled with

body exhalations and ill-tempered by body heat radiation, conditions which make the presence of an infection bearer a very distinct menace, not only to the immediate assemblage, but also to others which follow in the succeeding few days. Proper ventilation will very materially minimize this "menace of the movies"—one is much less likely to pick up infections in fresh air than in stagnant, overheated, foul air.—Chicago Sanitary Bulletin.

TAKING OUT BLOOD STAINS.—When you have blood on your hands, first wash them in pure water. Using soap at first is a mistake, as soapy water does not dissolve blood rapidly. Clear water and a nail brush should come first, soap next. Blood on a handkerchief or cloth should also be first washed in cold pure water.—Od. Quarterly.

VOL. XXX No. 3

THE MARCH, 1914 DIETETICANDHYGIENIC



PUBLICATION OFFICES

87 Nassau St.

New York

\$1.00 Per Annum. 15c. Per Copy.

The best antiseptic for purposes of persunal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teet.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts

water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY LOCUST AND TWENTY-FIRST STREETS :: ST. LOUIS, MO.

AS A

VAGINAL DOUCHE CHINOSOL

(Accepted by the Council on Pharm, and Chem., A. M. A.)

MORE THAN SUPPLANTS BICHLORIDE BECAUSE

CHINOSOL

IS A MORE POWERFUL ANTISEPTIC

IS POSITIVELY NON TOXIC

IS ABSOLUTELY NON IRRITATING DOES NO DAMAGE TO MEMBRANES

If mistaken for a "headache tablet", no tragedy can result.

CHINOSOL CO.
PARMELE PHARMACAL CC.
54 SOUTH ST., N. Y.

Digitized by Google

THE

DETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A.M., M.D.

Vol. XXX.

MARCH, 1914.

No. III

EDITORIALS.

WHY PROLONG THE AGONY.

WHEN the sentiment, to comprehend is to forgive, once "takes holt," it is likely to percolate into the subliminal strata of our consciousness and help shape our conduct toward the rest of humankind-toward a man like Doctor Morton, for example. Here is a medical man that was foolish enough to go into the mining business, and to do things he ought not to have done, evidently because he felt sure—was induced, perhaps, by people better versed than he in the ins and outs of mining mysteries, to feel sure—that the mines in which he became interested and which he wrongfully exploited contained the precious things he hoped-or was led to hope-were there. Consequently he, justly enough, spent a year in a Federal prison. If all the people who commit that kind of crime were incarcerated, where would be the jails to hold them? Well, having regained freedom, it is being insisted that the crime he has now fully expiated disqualifies him from further practicing medicine. Certainly such disqualification should hold for doctors that have been convicted of medical malpractice;

but Dr Morton's crime had nothing to do with his physicianship, which latter many consider illustrious in itself, which all physicians agree is at least of illustrious lineage. For humankind is indebted to Dr. Morton's father for one of the greatest boons ever vouchsafed it-ether anesthesia. And Dr. Morton has himself achieved no little in his vocation. We are all to-day greatly interested in radium; but years ago Dr. Morton did what is being done now-buried radium deep into cancerous tissues; and was ignored. And his pioneer work with high frequency currents has hastened the now general employment of this undoubted remedy by physicians specializing in electrotherapy. And it is well to reject the fact that whereas in the past many have been benefited by Dr. Morton's ministrations, many now looking for relief are now rejoicing in his return to the practice of his profession. Why, then, further punish either him or his patients? It is to be hoped, by the way, that Julian Hawthorne is not going to be prohibited from producing another line of English literature.

"When I look back on the processes of history, when I survey the genesis of America, I see this written over every page: that the nations are renewed from the bottom, not from the top; that the genius which springs up from the ranks of unknown men is the genius which re-

news the youth and energy of the people. Everything I know about history, every bit of experience and observation that has contributed to my thought, has confirmed me in the conviction that the real wisdom of human life is compounded out of the experiences of ordinary men."—President Wilson.

KILLING AND CONSERVATION.

In modern warfare the cost of killing one soldier averages \$15,000. In the Boer "row" this item came as high as \$40,000. The Balkan conflict with Turkey was conducted more economically; and yet \$10,000 was burned up in making one man food for powder-really a scandalously unprofitable business, considering that the outlay was a dead loss (nothing funny intended) except in fertilizer product. The most expensive thing in nature is the destruction of human life; the proceeding would be outrageously costly for the world if not a dollar were sunk in it. At \$15,000 the head no one has any right to claim humankind to have more sense than the most dunderheaded creature in the cosmos. The Balkan peninsula has thrown a scare into Europe that is evaporating two billion dollars; for such is what the six great European powers composing the Triple Alliance and the Triple Entente are paying for military preparations-not for war, but to prepare for war. Add to this money waste the loss of production by two and a half million young men being withheld from the world's real work, for military and naval service; and the total cost (at the individual rate of \$400 annually) of the fighting forces of Europe would reach the three billion mark. this is on the highly rational theory that the more crushing and blood-sweating the war taxes levied on the toiling masses, the less likelihood of international slaughter there will be! It makes one recall Heine's terribly grim and unholy apostrophe to the Almighty; "Oh, Thou magnificent Aristophanes of the universe, how your sides must shake with laughter whilst you look down upon us mortals and contemplate the epic idiocies of which we are capable." words to that effect.) The paradox has been well put that the most precious thing in life is the cheapest (in dollars and cents), whilst the most useless thing is the dearest, in money. And what is there cheaper than life conservation—which is, by the way, the biggest idea the twentieth century has thus

far evolved. Panama, for example, was a generation ago about the most pestiferous and gangrenous spot on the globe. Colonel Gorgas and his associates have turned that region into a veritable health resort; only two or three communities in these United States can to-day get under the Canal Zone death rate; and the actual cost of this job has been \$2.43 the individual. The Rockefeller Commission for the Eradication of Hookworm Disease and its humane allies are curing many thousands of the people in our southland at something under seventyeight cents the head. Which is the nobler achievement; such a life-saving one; or that other \$15,000 the man life-destroying proposition? Nowadays, on this side of the Pond at any rate, a great many people are seeing the point; for example, these citizens who are in the Life Insurance business. Actuaries are estimating that \$1,500,000,000 is a safe estimate of the economic value of lives that are lost needlessly each year in the United States alone, not through wars, but only through preventable sickness and accidents. The idea of health conservation was Professor Irving Fisher's of Yale. He several years ago outlined a plan for the education of the public to the end that Federal, State and municipal authorities might provide improved health protection; and he suggested that life insurance companies, purely in the way of business, and of "enlightened selfishness," could well afford to contribute in money and brains to such a Well, the Association of Life campaign. Insurance Presidents, representing policy holders all over the world (some twenty millions in the United States alone) are working the suggestion for all it is worth. They are educating their clients, and urging them by every means in their power, for personal and communal hygiene and for disease prevention. And the movement is permeating every phase of our civilization. Up to date, the biggest idea the twentieth century has evolved is this of the conservation of human life!

THE PHYSICIAN'S LIMITATIONS.

THE medical profession can and does devise means of prevention and cure; never before in its history has it been so effective in these premises. It has clearly demonstrated the practicability of eliminating such diseases as cholera, typhoid, the malarias and tuberculosis; the reason why they continue to exist is that, besides having their medical aspects, they bristle with economic and social difficulties. The physician gives freely of his strength of mind and body, without money and without price, in the service of the afflicted poor; and much too often also, be it said, in the unremunerated service of those not at all poor.

Beyond this who can expect him to go? He cannot, except by his example, make men and women humane. He cannot so affect the stress and strain of our modern civilization that cardiac and kidney diseases and insanity shall decrease, instead of increase, as is now the case; he can only indicate what should be done. He cannot of himself obviate starvation, alcoholism, lack of warmth, unclean habits of living, unsanitary, overcrowded, ill-ventilated tenements and factories.

The physician is constantly, in a most disheartening way, running into stone walls like the following: A widowed mother, with four small children, living in one room in a dirty tenement, is found consumptive. The children are in imminent danger of infection through ignorance and the impossibility of maintaining decent or sanitary con-

ditions in such circumstances. The doctor explains how the sputum must be disposed of to prevent infection; but how is this woman to change life-long habits, and be of a sudden so careful as not to jeopardize her children? Rest she must have; how is she to get it, and maintain her home? And sunshine and fresh air among the trees and flowers; what irony such advice in this pathetic status! Abundance of nutritious food, too; but what is she likely to get but meats many months in cold storage and "rots and spots"? Obviously the cure of this woman is a question, not of medicine, but of means. The ultimate problem here, the question how to prevent the conditions which produce such hopeless cases, is essentially economic. Much too often they are taken in hand after the irretrievable harm is done; and then public or private philanthropists lend a futile assistance.

It is as if a dreadful precipice had no railings at the summit and no signs to warn the wayfarer; yet at the bottom are ambulances to remove tenderly to the hospital those who have fallen quick, and mortuary wagons for the decent burial of those who have been dashed to death.

All this is by no means the presentation of new phases of public health; physicians and social workers have for years been setting them forth. The public has been informed concerning them; but it seems to be as yet dimly conscious of the truth concerning them and of their gravity. The public needs over and over again to be re-informed.

WIRING AN ANEURISM.

THE surgeon has to be a good deal of a mechanician; only the material on which he must work is not of wood and stone and metal, but most consecrated, such as houses a precious human life. To illustrate:

There is in the whole realm of medicine, which is so replete with melancholy instances, nothing so pathetic as the condition of the sufferer from a thoracic aneurism. An aneurism is a swelling, by reason of disease, of any blood vessel; and such an ailment is always most serious. But most grave of all is an aneurism of the thoracic

aorta, the largest artery in the body and the one coming directly from the heart. Thorax, by the way, means a "cage," and the cage here referred to is made by the ribs which enclose the chest.

People talk about heroism; but only those know what this word means that can sympathize with the man who realizes he had within his breast an aneurism, constantly growing larger with the increase in his gnawing pain, his brassy cough, and his difficulty in breathing through pressure of the growing tumor on his windpipe; who

realizes with almost absolute certainty that some moment, day or night, no one can tell when, (through strain either of mind or muscle, or indeed through no strain at all) this blood tumor will burst, with inevitable and instant death.

So serious is this disease, and so sad its end that physicians and surgeons have taken very unusual measures to relieve such a sufferer, to prolong his life and—very rarely—to cure him. Drugs that slow the action of the heart and favor coagulation of the blood in the sac are injected by means of a hollow hypodermic needle; it is thus hoped to consolidate the aneurism, so that its walls will not burst and result in a fatal internal hemorrhage.

Or there is the rest and starvation treatment, which requires the patient to lie recumbent for several months; by this the circulation of the blood is tranquillized and the heart's action becomes regular and slow, thus favoring blood coagulation within the The Irish physician Tufnell, who planned this treatment, computed that such a patient, standing up and going about, had a pulse rate of 96 per minute; after lying supine a few days it fell to 66: so there was a slowing by 30 beats every minute due to position alone. Multiplied by 60 (the minutes in an hour) the result is 1,800 less beats in that period, which multiplied by 24 (the hours in a day) gives 43,000 less beats in a day. And during three months, (the minimum time in which the patient should lie recumbent), his heart would beat almost four million times less (3,880,000) than if he had been going about like people in health. Then Tufnell increased the plasticity of the blood by reducing the solid food to 10 ounces a day, and fluids to 6 ounces: and he also gave eliminative drugs that would reduce the quantity of blood by withdrawing much of its serum (its watery element).

Surgeons have sought to cure aneurisms by compression, either with such instruments as the tourniquet, or by the elastic

bandage, or by digital compression kept up by relays of physicians (or their assistants) from one to two days. Or the ligature has been used, that part of the artery where the aneurism is located being tied off. But neither compression or ligation is possible for a thoracic aneurism.

For aneurisms within the chest wall acupuncture is done by very fine needles so introduced into the sac that they will cross each other; the blood coagulates around them and the coagulum fills up the sac. The needles, which may be shellacked, are left in several days and are then withdrawn. Or the aneurysmal sac is punctured with a hollow needle, through which are passed several yards of fine silver or gold or copper wire, that coils upon itself within the sac; the wire is then cut off flush with the surface of the body, and about it a clot forms. Or the blood is coagulated by "galvano-puncture": a galvanic current is passed through an insulated needle, which is brought in contact with the point of another insulated needle introduced into the sac about an inch from the point of entrance of the first needle. It is a combination of these last two methods that was recently employed in Bellevue Hospital, New York, upon an unfortunate man who suffered not only from thoracic aneurism but also from consumption. This poor sufferer could not inhale an anesthetic; so cocaine was injected into his back between the fifth and sixth ribs; and here into a hollow needle 36 feet of gold wire, most carefully sterilized, were passed through the wall of the aneurism into its cavity, where it coiled upon itself. It is one of the greatest blessings attending the use of the X-Rays, that the field of operation could by this means be accurately determined. Then a current of electricity was passed through this wire, finer than a hair though it was. The operation lasted four hours. About ten days afterward the patient died, neither from the aneurism nor the operation; but from his consumption.

"LIGHT THROUGH WORK."

DURING the fortnight or so preceding the holidays, sightless workers from the Lighthouse of the N. Y. Association the Blind have been showing how wonderfully well they occupy themselves in the shop at 66 Fifth Avenue, which some excellent citizen has "lent them the loan of." A number of extremely pretty and useful things are exhibited, either in the making, or ready for sale. The work is almost entirely by hand, the only paraphernalia that might be called a machine being the hand and foot loom of generations ago; one will examine with pleasure bungalow pillows, with woven tops, scarfs, rag rugs, reed baskets, bags woven in gold or silver thread, aprons of various designs, dusting cloths, iron-holders, grooms and other household belongings. And the wonder is how the designs are workmaterial apparently with identical texture except as to color-until it is explained that the blind worker keeps her different colors separate, and counts

them into their appropriate places as she works.

It is truly an admirable Association which has been formed to prevent unnecessary blindness and to "help the blind to help themselves." And one must indeed congratulate this organization that it has Miss Winifred Holt for its devoted and untiring secretary. Here is true service (declared the blind Senator Gore) and infinitely better than charity. And the pathetic fact remains that almost all blindness comes at or after birth; there is very little that is hereditary. Of 70,000 cases 35,000 were from ophthalmia in the new born (almost the cruelist thing in all existence, besides being so easily preventable); 21,000 resulted from neglect and abuse; 12 from industrial accidents; and above 600 from our erstwhile insane Independence Day celebrations. Education and a steadfast propaganda (most peculiarly worthy of support) are enormously cutting down the number of these pathetic casualties, and bringing enlightment in a real sense.

INTERESTING HEALTH REPORTS.

THE reports of the Metropolitan Board of Health are always interesting; there is much in them that is vital, besides statistics; and one comes upon paragraphs in them that are as good literature as the publishers can produce and a great deal better than is found in some magazines.

Consider marriage in its manifold phases. In a recent report the color line is first dealt with; this it seems is easily eliminated in matrimonial affairs. The number of mixed marriages varies from year to year. In 1911 there were exceptionally few—only twenty-one couples; seventeen white women married to colored men and four white men marrying colored women. White men seem to take racial differences more seriously. The term "colored" applies here not only to the negro race but also to the races not Caucasian—Chinese, Japanese and others, red, brown, or yellow skinned people included in the sixty or more nationalities re-

presented in New York. However most of the mixed marriages have been of the Caucasian and Negro races.

This Board of Health takes a philosophic view of life, in going directly from marriages to accidents, sickness and death. Jerome K. Jerome never realized how many diseases one could have until he delved into a medical cyclopedia, upon which he found himself suffering from every human ailment except housemaid's knee. In like manner he who wants to know how many kinds of things there are to be sick with need but study the metropolitan health reports. In Manhattan Borough of New York the mortality for 1911 was 33,000 and from thirtynine clearly defined diseases which, with their various subdivisions, aggregated 180 forms of physical derangement, whilst "other" and "ill-defined" causes added 5,647 to the regular list. In Brooklyn Borough there were thirty-five classified kinds

of sickness, with corresponding subdivisions, "other" and "ill-defined" cases making up the list. Tuberculosis is reported as usual to be the Captain of the Men of Death. Next comes in order pneumonia, heart disease and influenza. It is a tribute to our often maligned civilization that inanition (starving to death) is practically unknown—only one case (an infant of one year)

having been reported in 1911.

And it seems easier to get warm than it is to keep cool; in 1911 sunstroke destroyed 1,273 lives, whilst only three people froze to death. Boils and carbuncles "did" for sixteen modern jobs. From these reports one learns that nineteen different kinds of accidents can happen one, with close on to a hundred variations. One can fall in twelve distinct ways—from, down, on and over things: from bridges; windows, scaffolds, fire-escapes and high buildings; down area ways, air shafts, stairs, elevator shafts,

hatchways; on the sidewalk or some sharp instrument; over many obstructions, not forgetting a skipping rope.

One may be drowned, preferably in bays, rivers and other natural bodies of water; but also in tubs and pails. There are seven different ways of being suffocated. There are rated 42 causes of burns; and 93 others "not specified by the coroners." There are 27 ways of being poisoned, including means by camphor and bug mixtures to strychnine. Illuminating gas heads the list and carbolic acid comes next in order.

Very few people, according to these reports, die of old age; but rather of pneumonia, apoplexy, bronchitis and falls. Of the centenarians 75 per cent are women; and the United States is the birthplace of the greatest number; Ireland comes next in the matter of longevity, whilst Germany and Russia bottom the list.

THE VARNISHED FROG.

Science has proved that the varnished frog croaks its last croak when the air it breathes becomes warmer than 96 degrees, which is hot for frogs, but which the unvarnished frog will survive. The reason here is that this bactrian must use its pores to radiate the extra heat, which it cannot do when coated with varnish. Moreover, disease germs make short work of varnished frogs that are already weakened through There are humans who, alsweltering. though they are not varnished, yet accumulate coats of other material quite as deleterious to health; as in the case of the individual who, in overweening pride, boasted that he "bathed regularly, every Fourth of July, whether he needed it or not." The meaning is no doubt clear; further specification were a painful supererogation.

Also, improper, too long unchanged and too voluminous clothing disturbs the cutaneous function. The importance of this latter is not sufficiently recognized. The skin is an organ of respiration, and as such is a part of the breathing apparatus. And the skin secretes and excretes. He who bathes o' mornings gets his blood elements enriched, and avoids blood stagnation—a very evil thing; has his lung power and area increased; his appetite and nutrition

enhanced and the food elements better stowed away in those parts of the economy where they belong is assured a sense of mental as well as physical well being; and, in cases where such improvement is desirable (they don't seem rare) has his morals jacked up considerable. The skin is the "peripheral heart." Take a child from two to ten years old: he has a skin surface up to ten square feet; and underneath this is a stream of blood that should be in constant and rapid circulation. Within two minutes this blood (from two to ten pounds of it in a child) enters and leaves the surface, comes from and back to the heart. If this circulation takes longer or if there are pools, eddies and pocketed accumulations by the way, the organs and tissues will get congested with impure blood and will become hospitable to germs; the whole bodily machinery will act badly, and there will be disease. The man of forty and after who has several yards of peripheral heart and a veritable sea of blood flowing through it, who exercises little and runs instead to the undistributed middle, is especially counselled to apply his fluid restoratives outside rather than into his constitution.

Don't be a varnished frog!

ORIGINAL ARTICLES.

THE PROCEEDINGS OF THE SECOND ANNUAL MEETING OF AMERICAN ASSOCIATION FOR PROMOTING HYGIENE AND PUBLIC BATHS IN BALTIMORE, MD.*

CAMPAIGNING FOR PUBLIC BATHS.

By Mrs. Mary A. Jacobson, Newark. N. J.

Personal experience counts for much; this must plead my excuse for telling you of our present campaign for public baths in Newark, N. J.

In the spring of 1907, the Conference of Friendly Visitors, a body of women working with the poor in the hope of raising the standard of the families, undertook to find out what the city offered which could assist in its constructive work. tour of the three public baths revealed conditions decidedly unsatisfactory from a sanitary point of view. When the rather startling criticism of neighbors and others was added to the result of the investigation, it was thought unwise to recommend to the families in the care of the conference the use of the public baths, the feeling being that these people could least afford to run any chance of contracting disease, and could least afford the best medical service should disease be contracted. The Conference was constantly faced with the imperative need for sanitary bathing facilities for the mechanic and his family, who could not afford to pay the high rents asked for home baths. As a result, the Newark Public Bath Improvement Assoc-Many interests had iation was formed. to be consulted and the indifference and ignorance on the subject of public baths of those most concerned made planning anything like a complete campaign very difficult.

Realizing that a fight was ahead, the membership of the Association was very carefully planned. Organizations with

power and numbers were invited to become co-operating members. Committees from the Women's Clubs, the Trades Council, Public Welfare, and other social uplift societies, Italian and Jewish organizations, and the Teachers' and Principals' Associations were appointed to represent their Associations in the Public Bath Improvement Association. In the list of individual members are physicians, lawyers and business men of prominence and force in the community. The moral support from this type of membership has proved very great.

We called upon the Mayor and found him friendly. We then appealed to the Board of Works, which controlled the bathhouses, and found them surprised by our criticisms and satisfied with the baths and their management. We felt sure that the gentlemen of the Board of Works did not mean to be antagonistic, but that either they did not know the subject of public bathing, or were too busy to give it attention, or both. We realized then that campaigning for public baths is a matter of education—education for the busy officials and education for the people. It is necessary only to look at the old type bathhouses, to become convinced of the glaring mistakes along sanitary lines made by well meaning public officials and architects. It became our duty then first to educate ourselves—to learn from books, technical magazines, pamphlets, etc., by visits to baths in other cities. and through conferences with students of the subject, what a public bath should be, and why.

One learns early that technical knowledge and expert advice are necessary to a clear

^{*}The publication of these Proceedings was begun in THE GAZETTE of December, 1912.

understanding of a city's bathhouse problem to avoid repeating errors of construction and management. The more we studied the subject, the more we had to study, both practically and theoretically. Among other things, we found that bad or indifferent management could wreck the finest bath ever built. So in order to prove our case and present it in a definite scientific way, our Association engaged the services of two experts, who worked separately, not knowing of the other's work. Upon the result of their findings and the testimony of physicians in our city, we succeeded in closing the three unsanitary pools and in convincing our public officials that Newark's public bathing system was antiquated and unsanitary. Much good has come of this, and while the three old baths are far from ideal, they are at least clean and provide bathing facilities for thousands during the summer months.

The Finance Committee was also interested and convinced that public baths are not a dream of a few hysterical women. We saw each member at his home or place of business before the meetings, tried to get him to visit the baths, and gave him an opportunity to talk and ask questions. In this way we have been able to correct erroneous ideas and impressions, so that when meeting time came, because we knew what we were talking about and presented our facts clearly and briefly, we were heard attentively and respectfully.

In the meantime, we made it possible for the people to learn something of public baths and what they should mean to a commun-Through the courtesy of the Board of Education, a course of lectures on hygiene and public baths was included in the free lecture course. These lectures were illustrated and were given by the best men obtainable. Members of our Association have talked before clubs, teachers' associations, and in the churches. The press was appealed to with splendid results. We believe that our educational work has been well done because of the constantly increasing interest of organizations and individuals.

As a result of our educational work the people in one of our most congested districts were aroused to the necessity for a public bath in their neighborhood. In 1909 a committee from our Association appeared before the Finance Committee with a petition signed by thousands living in the "Hill" section. This, in conformity with

our belief that the demand for a public bath should be made by the people who are to use it. No appropriation was made, however, the Finance Committee giving as the reason that it desired to investigate the whole matter with the idea of putting the bathing system on a proper and sanitary The Finance Committee did make its investigation and went on record as favoring a new system of public baths for Newark. Then we again visited the Finance Committee and asked that the Board of Works be given sufficient funds to build the new bath. We were told that the request must come from the Board of Works, and so we took the matter up with that body. It then appeared before the Finance Committee, only to find that the city funds were not available and that a bond issue was the only way out. We found Newark had no authority under the law to issue bonds for this purpose, so new baths were again indefinitely deferred.

About this time a meeting was held on the "Hill," where four thousand attended. Part of the "Hill's" campaign was planned to include a parade of several hundred chil-The parade was scheduled to take place on the day the Finance Committee and the Board of Works were sitting in the City Hall. The newspapers heard of the proposed plan, and through them the officials heard of the parade too. Some of them requested that the parade be called off, until after the meeting of the Finance Committee and the Board of Works to plan for bathhouse accommodations. Having no desire to embarrass the city officials, we postponed the parade. The meeting of the officials did take place, our cause was recognized, and it was decided by them to draw a bill to be presented at the next legislature, authorizing the city of Newark to issue bonds for a sum sufficient to put the bathing system on a sanitary and adequate basis.

In the meantime election drew near, and the Essex County Trades Council, a labor organization and an active member of this Association, addressed a letter to every candidate for office, requesting him to declare himself for or against a new and adequate bathing system. Replies were received and circulated throughout the organization. Of course every candidate stood for baths.

Some time after election, several thousand circulars in English and Yiddish were distributed throughout the "Hill" section,

calling attention to the fact that the petition for a bath on the "Hill" had been presented and that thus far nothing but promises had been the result. The circular also urged the people to see that the promises were kept. A delegation of the people, with a committee from our Association, then appeared before the officials and again urged the early construction of the much needed bathhouse. The English, Italian, Jewish and Polish press was in the meantime appealed to, and helped the cause greatly by its fair and comprehensive reports of the work of the Association and by strong editorials showing the need of the bath.

As a result of this and of the Mayor's interest, two bills were presented to the Legislature of 1910—one taking the control of the present baths out of the Board of Works and putting them in the care of the Playground Commission—a non-partisan body. This bill died in Committee. The second bill presented provided for a bond issue of \$250,000 for new baths, control of which should rest with the Playground Commission. This bill was also killed in Committee. Then a committee from this Association went to Trenton, our State capital, to find out, if possible, what the trouble was. We found political interests standing in the way of our bond issue privilege. Our Committee smoothed the path for an amended bill providing for the bond issue, but leaving the control of the baths in the Board of Works. It was introduced, and after some lobbying, was passed by the Legislature of 1910.

Then real, definite work for the Association began. First we had a survey of the "Hill" section made in the search for a site. I know of no one greater contributing cause to success or failure of a public bath than that of location. So we went about this part of our work with the greatest care. Before making our choice, we secretly consulted disinterested persons qualified to judge of the relative merits of the several sites in contemplation. When we finally decided upon the corner of Montgomery and Charlton Streets, we secured options on the several parcels of property, and then submitted our suggestion to the Board of Works. In this way we got a line on the price of the property before it became known that it was wanted for public purposes. Through the antagonism and clever manipulation of political and real estate interests, the property was fully acquired only after a fight by the Board of Works and this Association, and condemnation proceedings had to be resorted to in the case of one or two parcels. However, we feel that the city secured the very best site and did save money on the transaction.

Then bathhouses in other cities were more thoroughly studied, so that the Newark buildings should combine the best features of all other bathhouses. Conferences were held with the architects, and finally a building was planned and is now nearing completion. This for beauty of simple architecture, perfection and sanitation, convenience or arrangement and minimum repair features, is not excelled by any other bathhouse in the United States. The new Building stands in the midst of a population of thirty thousand people, to all of whom it is convenient enough to be used to advantage.

Our Association is busy now interesting the principals and teachers in the neighborhood of the bath in the bath, and through their efforts we hope to interest the children and so reach the parents. We have great faith in the popularity of the bath when it is once known in the community. We are trying to make it an inspiration to the people, so the waiting rooms shall be decorated with pictures, plaster casts and flowers. These things are all donations from interested friends of the Association.

Note. (The building was opened on the 3rd of September and bathed several thousand on the first day).

For two years agitation for a new bath in the congested East Side has been going on. Petitions have been sent to the powers that be, and we are planning to appear before the Finance Committee the latter part of this month and again urge the necessary bond issue. Last year we had a meeting in a school auditorium in the district in the interest of this bath, when Dr. Baruch, our esteemed President, and your own Dr. Gichner helped the cause mightily by their splendid presentation of facts and pictures.

The 1913 Legislature passed a bill taking the control of the baths out of the Board of Works and putting them into the care of the newly organized Playground Commission. Here we feel the baths will take their real place in the life of the city and get the attention which rightly belongs to them. A Committee from our Association appeared before the Playground Commission recently and found the spirit of co-operation

very marked indeed. This was extremely gratifying to us, since our policy has always been to proclaim the justice of our course and to present it in such a way as not to antagonize, but to co-operate, with the public officials. Already the Playground Commission is busy curtaining the open showers in the old bathhouses. Abolition of bathing suits is another step in the right direction. Our dressing rooms are in the galleries, and sheets are being provided, which

can be easily laundered, to supply protection to and from the showers. We have no pools in use, we have no laundry, nor have we a sterilization plant. The sheets and towels will be sent to washerwomen in the neighborhood until such time as we can get proper laundry facilities. We are hoping that bathhouse work in Newark shall be so efficiently done in the future as to make long continued effort on our part superfluous.

DISCUSSION.

By Mr. Muller of Trenton, N. J.

I no not expect to teach you anything, but I have learned much more during this convention than I could possibly impart to you. I was very much impressed with the speech or the address of your President last night at the Johns Hopkins University. a man comes from a city having over 100,-000 inhabitants, boasting to be one of the oldest cities of the United States, full of points of historical interest and proud people, he feels ashamed of himself when he must admit that this fine city has no public bath although there is a river running along side of the city—not only no public bath, but no bath in any one of the schools. This is an admission that should drive the blood into a man's cheek, but it is true of the city of Trenton, N. J. What can be done? I believe that we should have bathrooms, shower baths, or whatever it is to clean and scrub the children in the schools. We provide for sanitary rooms where they hang their wraps. But a very dirty child may hang her very unsanitary garment over the garment of my little girl. It seems that in many cases we are straining at a gnat and swallowing a camel. It seems to me that if we keep our rooms clean and sanitary, we should try something to keep our children sanitary and scrub them. **Just how** to go at it, I do not know. There is the

Delaware. The Delaware does yeoman's work for the country of its neighborhood. I believe it could be made a little more useful in a sanitary direction, not only in a historical relationship. I listened to Mrs. Jacobson very carefully because I know she put her finger on the sore spot. We are not in Europe where we have a paternal government; we must get a majority of the people with us before we can do anything, and so, for instance, we have in every city a board of education. We come to the board of education, good and true men, if it is a good board, but in most cases we have a sprinkling of men who do not want anything but the three R's in the school, and ask for the installation of baths. They will tell you they are not necessary, that they did not have them when they went to school; but they have forgotten something -they grew up in the country where they had as a gymnasium the whole neighborhood and all the rivers and streams as swimming pools—they do not consider for a moment the poor boy in the big city who has no playground but the dirty alley and that he must have other safeguards than they had when they were boys. I have the honor of being a member of the school board, and I do what I can in spreading your gospel in that direction.

REPORTS ON THE FIRST INTERNATIONAL CONFERENCE ON PUBLIC BATHS AND SCHOOL BATHS.

Mr. Baedenkoff.—Ladies and gentlemen: —The impression which I got at The Hague was the difference between American public bath advocates and those whom I met there. I could not help being impressed by the great number of learned men, with no reflections on this body, the large number of learned and professional men who came from European cities-Munich, Berlin, from France, from Belgium, and even from Norway. Then the elaborate preparations and the elaborate reception that they gave, as if we were people of honor in this country. We are considered by some gentlemen as philanthropic cranks, but over there they seemed to think we were the leaders, and it certainly was a pleasant surprise. I would like to say that the three representatives that went from America were Dr. Hale, Dr. Gerhard and myself. Each one of us is about five feet four inches in height, and I told these people we were not typical so far as height is concerned.

It is evident that the subject of baths is much larger in Europe than here. I was told by a very prominent citizen of The Hague that in that city nine residents in ten were without bathing facilities in their homes. We in America would think that terrible. Here in Baltimore the general average is six out of ten, which is very different from nine out of ten without bathing facilities. I must find fault with those who speak of the cleanliness of the Dutch. They live in unsanitary places. through the Dutch cities; I felt as if I were living over a swamp. In the houses there was a damp atmosphere and an odor in the bathhouses. With us here, we are above waterline to a certain extent and are in a drier atmosphere.

Now the observations that I made after the convention were as illuminating to me as some of the features of the convention. I went to the baths in the factories. I wanted to see how their law was carried out. In a number of European countries wherever one hundred workmen are employed the owner is obliged to supply a public bath for the work people. I remember going to one of the mines in Belgium and found there a room as large as this which was devoted to the cleansing of the miners. The men as they came out of the shaft were able to clean the coal dust from them and go

out clean men. It occurred to me that is a very beneficient law. I do not know if there are any laws in this country, but at Scranton and Wilkebarre and probably some other places there are good baths. They are not swimming pools, but cleansing shower baths.

I made an inquiry there, and I would like to make the same inquiry here, whether there are open swimming pools in Europe. I did not know we were so exceptional, but I found only in three cities that there were open swimming pools where the water was not artificially heated. There is a pool in Brussels. It is large, but it occurred to me that it was not so beautiful; however, it is useful. There is another in Antwerp which is close to our beautiful one in Patterson Park. which we saw was a private swimming pool at Rotterdam. I wondered whether we here in Baltimore and still further south ought not to encourage the open air swimming pool. We are glad that our pool here is so pleasant and we hope to-morrow will be pleasant so that you may all have a chance to try it.

Dr. Hale:—Mr. President and fellow-members: In attending the International Congress last August, I was delegated not only by this association but by the city of New York, and to a certain extent my report will probably cover the same ground, though not altogether.

DR. WM. PAUL GERHARD, C.E., reported that about 300 delegates attended from Austria, Belgium, England, France, Germany, Greece, Italy, Netherlands, Norway, Sweden and Switzerland. It was universally noticed with regret that the United States of America, though invited, had declined to participate officially in the Conference.

A report on the Conference, containing 287 pages with diagrams and illustrations, by the General Secretary, Miss A. M. Douwes Dekker, can be obtained by the payment of two dollars. It contains his full report on "The Progress of the Public Bath Movement in the United States."

International Association for Public Baths and School Baths was formed, and this to meet in Brussels in 1914. The membership fee is two dollars, and includes a Quarterly Magazine.

The Exhibition held in connection with the Congress deserves special mention. The largest exhibit came from 18 German cities, and among other cities which sent plans or photographs should be mentioned 7 Dutch cities, also Stockholm, Antwerp, Vienna and Greater New York, which latter had a very complete exhibit of the Municipal Baths in the two Boroughs of Manhattan and Brooklyn. The Rev. Dr. Beadenkoff exhibited a model of Baltimore portable baths, and the

speaker showed tabulated statistics of people's rainbaths in American cities, also views of New York school baths, kindly furnished him by Supt. C. B. J. Snyder, of the Board of Education.

Mr. Gerhard believes it to be the duty of its Association to emphasize the necessity of establishing a National Board of Health, and to explain the importance of such International Congresses, and to work for a proper representation.

THE PUBLIC ATHLETIC LEAGUE OF BALTIMORE.

By Dr. WILLIAM BURDICK.

This public league, as an organization, is two-fold: we attempt to do something for the recreation of boys and girls over twelve years of age, but we also attempt something higher than that, for we have learned from the 4,000 boys that we have come in contact with that the average boy in Baltimore begins to grow at fourteen and gets his growth and maturity at fifteen and a quarter years. Consequently, we take care of boys not under twelve, leaving the recreation and play of younger boys and girls to the Children's Playground Association. We assume that the important thing in the child's life at that time is its growth, and we are doing everything that we can to promote the growth of the individual. We are not primarily interested in just merely the records and times and distances that individuals may make, but we are particularly interested in the growth of the individual into a strong and healthy man or woman. We are not giving the type of exercises and games that simply produce sport, but those that produce strong hearts and lungs and organs that are going to make them efficient in life. The day is past when the emphasis is laid on the size of muscle and physical strength and it is now on the individual to use the body efficiently. are interested in the growth and health and strength of the child, not only in its present health but its future, and we have attached to the League a physician who spends his

whole time in examining the boys and girls. It is surprising to find that a large number of them need attention, inasmuch as we are examining them for their ability to take part in athletics. We examine the heart and lungs, which is not done in practically any of the school inspections anywhere in the country. We find that two per cent. of the girls have organic heart disease. In view of this, we are sure that the inspection is very essential. Also if we find a boy whose rate of pulse is too rapid, we keep him away from athletics.

More important than the physical side of the work of the Public Athletic League is the impression it has on the qualities of the boys and girls as they mature. The individual, prior to adolescence, is uppermost. At that time the boys and girls form the gang, and if we are to develop good citizens that is the time to do it. That is the reason that we looked for some opportunity to co-operate with the Bath Commission. The Bath Commission here does more than in some other places, at least in Philadelphia. The Public Bath Commission furnishes instruction in swimming, and there it necessarily stops. The Public Athletic League comes in and furnishes stimulus to greater interest in swimming and makes it a part of the recreation of the community. Public Bath Commission gets the patrons for its baths, the Public Athletic League comes and supplements that work by furnishing what we term a badge contest in swimming,—we establish standards. A better way to consider that is in relation to the present views on scientific management. We are trying to manage athletics by putting up certain standards for our various types of swimming.

Now in this badge contest we have a definite aim. We have tried in it to use the recreation to constructive ends. We have tried to teach courage and self-reliance by making the swimming of a more comprehensive type than swimming of ten years ago. The boy to get his badge has to swim twenty-five yards within a given time. When he gets the next badge he has to do a back stroke, he has to do a swim of a certain distance in a given time, so as to get enterprise in addition to sport. We have taught them so that they may be able to put to the service of the community what they have learned, by being able to rescue life.

Again we have tried to make this art of swimming popular by giving them advance instruction, for the Public Athletic League uses the same instructors as the Bath Commission, and they give special time for preparing the boys and girls in this advance swimming. We give them this all-around type of contest, and the boy who completes it gets a badge. While the prize is of no intrinsic value, the boy gets a feeling of power every time he makes progress in swimming. It gives him a task equal to his ability and so encourages him to more effort. Waste is eliminated because the boy has a definite aim in his swimming. Finally it brings about a co-operation between the leader and pupil because they are both interested not so much in winning places as in proficiency of the individual. As a result of these group games, we believe we are producing a type of citizenship that is well worth while and we feel that it is worth all our efforts.

DISCUSSION. WEDNESDAY AFTERNOON, MAY 14.

Mr. Beadenkoff:—I would like to suggest that it is probably for most cities an economic question that we are discussing this afternoon. It is a question whether in spending \$75,000, as we are now doing in Baltimore, it is best spent in giving \$25,-000 to the Playground Association, \$10,-000 or \$15,000 to the Public Athletic League and the other \$40,000 to the Public Bath Commission. Is it best to give it to three separate departments all doing kindred work? You will also note that the Park Board is close kin to the public bath work and the Park Board gets \$150,000 or \$200,-000 a year for their work. How far should the question of a unified administration go? That was the purpose of the Committee when they laid this question out and these details that Dr. Hale and Dr. Burdick have given us help to unfold the subject. We hope that Mr. Tutewiler will answer some of the questions in proof of what is actually being done. In Baltimore we represent not a unified administration but a happy family of five or six members. The great park Board which owns, I suppose, 2,000 acres of ground in Baltimore, said to the

Bath Commission, "you must manage this large swimming pool because you are a bath commission." And so we are a manager of that pool. Our management is limited by the fence around the swimming pool. The Athletic League is our next door neighbor; they can answer best what their limitations are, and on the other side is the Baltimore Playground Association. All of us in that one place are under the control of the great Park Board; the Park Board is the father of us all in a certain way. The manager of the Park Board said to us when he transferred the keys, "you are to take this and manage it for us, because you are supposed to know how to manage it better than we. We cannot give it to you, because we are the legal owners of this park, but we have given it to you as far as we can transfer it as long as properly managed." And there is never a hint that we shall be expected to give it back. And now, to repeat, is it better to have all these separate organizations combined into one large management, is it economical and will it be better managed?

Mr. Ashley:-Mr. Chairman:-I would

like to see that question postponed a bit, and I would like to hear and learn the entire financial arrangement of this bath question. It is something that we west of the Alleghanies do not know very much about, and as the secretary very kindly said that we were more interested in getting people who did not know how to equip than in talking about the details, I should like to have some information as to the customary way to initiate and finance these bath centers and to maintain them.

Dr. Baruch:—It is a large question, but I shall be glad to have any member of the association answer it.

Mr. Beadenkoff:—Our report is our reply, and I can send you six or seven of them. It has not been the same in all cities. Here it was partly benevolent and partly municipal. I think Dr. Baruch can tell how it started in New York. In Baltimore it started in a very humble way—a few sheds erected on the harbor beach—and slowly that grew until a benevolent man came along and gave \$200,000.

Mr. Ashley:—There must be some forms that are much more economical than others; there must have been some forms of economical management that have been failures and it would be very wholesome to some of us who might attempt some initiative of this kind to know those that are failures. We would much rather copy some that have been partly successful. I desire to know, primarily, whether in almost all these cases the city has financed these projects in the beginning; I desire to know, secondly, whether they are maintained by city tax or partly by tax and partly by subscription or if the service is either one or the other only.

Dr. Baruch:—I shall be glad to send the gentleman a report on public baths by the Department of Commerce and Labor published in 1904 in which the history and development of nearly all the public baths in the United States is briefly given. So far as my own observance is concerned, I will not go into details except to say, as I am called the father of public baths, that I had a great deal to do with the politicians in the beginning. I went before Mayor Grant in 1890, but without success; then I induced one of the aldermen in New York to have a resolution passed by the Board of Aldermen appropriating \$25,000 for baths. Because the Mayor did not believe the poor people would bathe, although this resolution passed the Board of Aldermen,

he pigeonholed it. I went to his successor Mayor Gilroy, and he said, "Doctor w would give you baths, if we had any promis that these poor people would bathe." The I went to work outside the politicians and I read a report before the County Medica Society, giving my views on the subject o the Rain baths, and the A. I. C. P. of Nev York took the matter up and built a bath Within a year of that time we prove through this association that the poor peo ple would bathe. The greatest improve ment in this line was made by a woman in Chicago, Dr. Gertrude Wellington. I gav her all the points that were necessary, showed her some of the baths and she had Mayor Swift to pass a resolution to appro priate money and they built the first batl in the United States that was free. was my contention—that a public batl should be free as a public park. The Har rison Bath in Chicago was built entirel through the initiative of philanthropic and public spirited women who went before the aldermen and got the money. In Nev York it was initiated through private phil anthropies which took up the idea and gave me the privilege of demonstrating to the authorities that the poor people would bathe if they had the opportunity. Mayor Strong, who was regarded as th reform candidate, promised the public bath and appointed a committee to build thes baths. That went on for a year, and the the committee made a report. There wer some objections to building the baths be cause they had to be built in the publi parks, but we visited Mayor Strong agai and carried it through to a successful issue In this way our public baths in New Yor. were started—the first one in Rivington street. 700 thousand bathed there the firs year of its existence.

Mr. Ashley:—That is without any charg whatever?

Dr. Baruch:—We used to give them the towels and soap also, but they had not had quite enough baths to be imbued with some of the godliness which Wesley says is the result of cleanliness. We had to withdraw the towels, and now they are bought a little stores in the neighborhood, and the furnish their own towels and bathe just the same. The tradespeople around the baths put out their little signs; they all charge bathers five cents for soap and towels. They can take either or neither, will send you a copy of this report and am sure you will find the data in it quite

sufficient to answer your questions and I shall be glad to correspond with you on the subject and give you any information that is required.

Mr. Beadenkoff:—New York baths are the largest, but Baltimore or perhaps Richmond baths are the best. the financial question—Baltimore city gives Public Bath Commission on an average \$55,000 a year. We do not believe that it is necessary to give perfectly free baths. We charge them three cents, when a man is able to pay; if the man cannot pay it, he is given an absolutely free bath. We receive \$20,000 a year in fees, so that our net expense is about \$35,000 a year—that is not absolutely correct every year, but roughly so-and, for that, we give the baths to about 700,000, and the comfort station to another 700,000 or 800,000 people. These figures we will be glad to give you in our annual report. We of course give the soap and towels and the whole cost of them and their washing is included.

Mr. Mason:—I am very much interested in the question of supplying soap and towels. We have provided them, but we found that the loss of towels was very great. Our patrons on the lower East Side will take away the soap and towels, and furthermore we find they buy from the outside a towel that is fairly clean and absolutely sanitary. One point we make is this, we have no right to take a fee from the public at both ends. We tax them in the beginning for the public baths; what right have we then to charge them for what they have already been taxed? That is one of our viewpoints. Should we take money from both ends in order to operate our baths? If we could charge two cents per bath, for the year, with our patronage of six million, we could almost pay two-thirds of our operating expenses.

Dr. Hale:—Mr. President, we have had many years of experience in Brooklyn. There are thieves to be sure, and we were greatly troubled with thieves when I became superintendent, so we are training our superintendents to be pretty careful and we seem to have aroused the public conscience, and we find that the people do not very often steal the towels now. Our losses are not severe. We could do better if I had full control of the situation. I would have every towel made for us and with the name of the bath woven in it so that it could be

identified. The argument as to the taxpayers, I think, is very fallacious. We have in New York an immense subway system and we are going to build more, and we pay taxes on them and all that, but I declare that we cannot let every man ride gratuitously; so for the baths—the fact that they are built by public money is no argument that we should supply soap and towels free and as a public service. You compare the situation in your borough with that in mine. As I have already stated the tradesmen do give you the soap and towels, but they charge five cents for them. If you work that out, you will find that your net revenue will not be as large as you anticipate, and furthermore there are a great many people who do not buy soap and towels, they bring them with them. The bath system is a great public utility, and I hope the recommendation that I made in my report to the Board of Estimates will be adopted throughout the entire city of New York.

Mr. Todd:—I do not think Dr. Hale's illustration is very apt. The subway is not a charitable organization. We are not going in the streets trying to get people to ride in the subway, but we do want them to use the public baths.

Dr. Baruch:—And the bath is called a "public" bath; the subway is not.

Mr. Tutewiler:-We all like to know what is going on somewhere else. Indianapolis is an inland city of some 260,000 inhabitants. We have no water except about once in ten years when we have a flood. We have two rivers and two small creeks that run through the city. For the last ten years the dredging scows have been taking sand and gravel out of the river and creek, in some places making holes eighty or ninety feet deep. These holes have been the source of great danger. In 1905 our first public bathing place or protected swimming pool was established. Something has been said here about politics and the trouble of getting appropriations, etc., and I want to talk briefly on the experiences we had at that time. Our Mayor was of one political party and the people who advocated protected swimming places were another, but neither side would act for fear the other would get the credit. About this time, when the authorities were wrangling about whether they were to make an appropriation or not, I started a place, not

a man, and a swimming hole that the boys selected themselves and put a lifeguard in charge. The place became so popular that the citizens formed a public bath association and collected enough money to build a bath out of an interesting ruin. Council passed an appropriation for it but about that time I went off on my vacation, and the secretary of the Public Bath Association wrote me that the Council had appropriated the money, but the city would not do anything. They were waiting and did not know whether they would spend it that year or not. He could not get any money to run the place. I suggested to him that he form a committee which would consist of the pastor of the church to which the Mayor belonged and the pastor of the church to which the Comptroller belonged and some prominent business men to give the committee character and get the committee to interview the city authorities. The committee was formed and finally persuaded the city authorities to take over the place we had started.

The next effort made along that line a public spirited citizen bought an old swimming hole that had been on the stream from which the city gets its water supply. That place proved very popular. A fee of fifteen cents was charged which made it self-sustaining. That place was not run, however, by the city, but by an organization known as the Children's Aid Association.

About this time the legislature passed a law creating a Playground and Public Bath Commission. This commission proved to be an absolute failure because neither department had entire control and neither would give anything for the support of the The next legislature came around and we succeeded in getting another law through that gave the city of Indianapolis a special tax of a half cent. This was a special fund and could not be diverted. It did not revert into the general treasury, and the expenditure of it was placed upon the Board of Public Health and Charities. The reason that was done was because neither the Park Board nor the School Board showed any disposition to help Last year was the first year along. any of this fund was available The year beany work at all. fore we had no money, but we had no bathhouses, all of them were gone. We succeeded in getting an appropriation from the Council of \$1,200. With that \$1,200 we fixed up an old gas tank. The old stone

walls had been left. It was one hundred and twenty feet deep and 137 feet in diam-The gas company owned part of it and had dumped thousands of tons of cinders in it. To save expense in getting water into the place we got the Board of Public Works to give us the use of a fire plug, otherwise we would have had to take the water from the mains and gotten under a concrete sidewalk, etc., at a great deal of expense. We got this fire plug and ran the water into the tank through a pipe. At this time we did not have money enough to build a fence around it, but "necessity is the mother of invention" and we made arrangements with the bill posting company to build a wall around it. One concern gave the pipe we needed. A branch of the pipe goes around and forms a good rail around the top of the tank. This provides the shower baths with water. It took nearly six hundred feet of pipe to go around the tank. Every night the sewer drain is opened at the bottom and the fire plug is opened on the other side. During the day there is a surface drain working all the Another feature about the tank is the shower baths. The boys cannot go into the place without going through two shower baths, and if they are particularly dirty they are held up and made to wash themselves thoroughly so that before they go into the tank they are clean.

We put in a false bottom, grading it so that on one side it is two and a half feet deep, while it is seven feet deep on the other.

We have a number of bathing places with temporary dressing rooms with lifeguards, who have taken care of a great many boys. Last year, about the 24th of May, before anyone thought of going bathing we had lifeguards patrol along the river. Along the streams and rivers, as I have said, there are deep holes and although we have the bathing places in the safe part of the river, the boys go in other places and get in the holes and drown. These lifeguards found a number of men and boys congregated along the river and recued several of them from drowning.

I bought a launch this year, as two of these streams can be made navigable with very little dredging, for the purpose of patrolling the stream and making these boys keep out of the dangerous places and stay where they belong, at the places where there are lifeguards to protect them. At the time of the flood a couple of weeks ago, the superintendent of police was anxious to get a boat. He called for me and I took him down some life preservers and a lot of rope, but he was anxious for a boat and could not get any. I happened to think about this launch and offered him the use of it

and it was the means of saving eight hundred to a thousand marooned women and children who could not otherwise have gotten food and water. A row boat could not have lived in the water, so that the purchase of this patrol boat turned out to be very fortunate.

CORRESPONDENCE.

To the Editor of the Dietetic and Hygienic Gazette.

Dear Sir:

I am extremely gratified to see that you are publishing the very interesting and valuable paper read before the American Association for Promoting Hygiene and Public Baths at our Baltimore meeting, and I have subscribed to the magazine for a period of five years from date.

As one of the founders of this Association, it occurs to me that your readers might like to learn something about it. The Association grew out of a movement by Rev. Thomas M. Beadenkoff, Superintendent of Public Baths of Baltimore, for a conference of the bath officials of that and other cities, at New York on May 14th, 1912. Owing to Dr. Baruch's long, earnest and successful propaganda for public baths, I interested him in the movement, and Mr. Beadenkoff magnanimously joined me in securing Dr. Baruch's election as president, which I again moved at the Baltimore meeting and was supported by the united vote of the Association.

This organization was in part modeled after that of the American Association for the Advancement of Science in that a permanent secretary, elected for a term of five years, was provided for; as it seemed that such an officer would give the stability to the Association. This, of course, was before any election of officers was held. But, inasmuch as some of our members do not seem to understand this, it seems to me that it is proper to explain it.

My position, of course, puts me in a position to feel the public pulse; and I feel more than repaid for the great amount of gratuitous labor I have bestowed in building up the Association, by the reports coming to me from time to time from remote parts of America and also from Europe, indicative of the great and world-wide interest in our work.

The Association was officially represented at the First International Conference on Public and School Baths, held at The Hague, Holland, in 1912, by Mr. Beadenkoff, Dr. Wm. P. Gerhardt and myself, and I was also appointed to represent New York City and to take thither an exhibit from the city.

I feel that the cooperation of your Gazette is epoch-making, and I hope that the publicity you are giving us may induce a great increase in membership. The German Association has many thousand members. Our own already includes most of the leading bath officials and many of the leading sanitarians of the country, but the number of members should be greatly augmented, as annual dues are only \$1.00, and, inasmuch as you are giving special rates of subscription to your valuable journal, this should be a great help also.

The constitution fixes the date of our annual meeting as the second Tuesday of May in each year. This, then, makes May 12th the date for this year, and the meeting will be held at Newark, N. J.

Yours truly,

WM. H. HALE,

Permanent Secretary.

The Municipal Building, Brooklyn, N. Y. Feb. 2, 1914.

VALUE OF "CIVIC HEALTH."

In our present enlightenment, men seeking homes and manufacturers casting about for the location of industries are more and more making healthfulness a prerequisite to their selection. A great industrial company, contemplating a change in location for their plant, sent a committee of intelligent work-

men to inspect the town under consideration. The committee gave an adverse report because they were unable to ascertain anything which was definite in regard to the health of the place and because the statements of citizens were conflicting.—Birth and Death Bookkeeping, bulletin issued by Association of Life-Insurance Presidents.

MENTAL BALANCE ON THE SUBJECT OF DISEASE.

By Waters F. Burrows, M. D.

Prevention and cure of disease and the dissemination of knowledge concerning hygiene and prophylaxis makes the conclusion assured that mankind lives to-day in an age when health is more general and disease less prevalent. However, lives are still sacrificed to such preventable afflictions as tuberculosis, the multiple ills, poor health and lowered resistance which follow stomach, colonic and rectal disturbances, and from abdominal conditions, stomach ulcer, gall stones or chronic appendicitis, permitted to remain until complications ensue and the dangers of relief have become surer, while stiffening muscles, neuralgias, crippling joint disease, nervous debilities, hardening arteries and closely allied old age are associated with preventable digestive disturbances.

The chronic invalid suffers much from incompetent knowledge of essential facts, for his thoughts have long been introspective and, unduly influenced by reaffirmations of some cure in others, he grasps at the hope inspired by any supposedly new discovery and is nearly as often doomed to disappointment. With a broader conception of health and laws regulating it and a lessened regard for disease and methods of curing it, much mental distress and many physical ailments, leading to chronic debility, will be eliminated. Actual ignorance is preferable to continued thoughts upon sickness but it is useless to deny the existence of disease, as is done by the adherents of certain cults with whom constant brooding upon the "absence" of disease leads to its realities being stamped upon the mind. The Christian Scientist presents the extreme to which individuals may go when they concern themselves with pathology, disease and morbid mental states.

A little knowledge is a dangerous thing but were it not for the positive harm which sometimes ensues when the sick attempt to balance their opinion with the suggestions

of the trained surgeon or physician, it would be unnecessary to recall the fatal delays or complications to which procrastination leads. A more general and clearer conception of physiology and hygiene is required and such will not cause abnormal minds, depression, nor self-centering but on the contrary it results in the satisfaction associated with knowledge as distinct from superstition. Then the average individual will not regard, as at present, abdominal distress or pain as an indication of "indigestion," "stomach trouble," "biliousness," or "ptomaine poisoning," but will realize that constipation, with slowing of the intestinal current and flooding of the body with bowel toxines, or abdominal inflammation, frequently in colon, appendix or gall bladder, is the irritation without which the stomach is seldom involved, and that neurasthenia, nervous prostration, many headaches and debility are due to definite, curable intestinal and hepatic insufficiencies, most frequently associated with abdominal displacements, and bowel stagnation.

However, although physiology and hygiene are wholesome subjects to study, pathology, or the study of disease, has a very different effect. A man is as he thinketh is illustrated by those individuals who, untrained to deal with the problems of disease, are continually delving in matters depressing and better avoided. Such abnormal men and women consider disease with thought fixed upon themselves, fitting the symptoms to their own supposed ailment and making rational treatment more difficult. Many such patients need solely advice and this should be "the structure of your body (anatomy), its method of working (physiology), the manner of correct living, eating, drinking and sleeping (hygiene), and the laws for the preservation of health and life (prophylaxis) are suitable subjects for study, but thinking upon, fathoming and acting preventable diseases

(pathology) and meditating upon symptoms reacts injuriously upon yourselves."

Disease cannot be eliminated but a knowledge of the subjects referred to will do much to prevent or control it. The problem in detail can wisely be delegated to the conscientious physician or surgeon, although there are symptoms such as common aches and pains, or minor ailments which appear like vital ones, concerning which it is unnecessary to be alarmed. However, with a correct understanding of physi-ological and hygienic elementals these anxieties are avoided or, when required, the physician is called without delay. The individual to emulate is the one who, occupied by daily duties and with wholesome diversions, avoids, when possible, the more sinister, melancholy and depressing facts of life as portrayed in the daily press and periodicals. All realize the power which the mind, or its medium the press, exerts for good or ill, and consciously or unconsciously each one is the recipient of the effects of such a force. The danger, however, consists not in the influence of "mind over matter" but in the possibility of a deleterious control of mind over mind.

Many patients persuade themselves that theirs is a most unique or dangerous affliction and one seldom visited with the same severity upon their fellows. This follows from the reality of disease and the distress accompanying it which only the sufferer can fully comprehend and the inability to realize to the same extent the troubles of others. It also follows that the patient relieved of pain is more grateful and more often believes he has been in great danger, than the one who has not thus suffered. Pain, however, is by no means the most important or frequent sign that life is insecure and death comes to the great majority without mental or physical suffering.

The false feeling of security, when pain is absent, often leads to neglect, not only in consulting the surgeon when necessary but in carrying out his instructions. In the treatment of constipation and digestive disturbances the writer finds many rectal conditions which have been long disregarded until pain supervenes or some grave complication has resulted. All common rectal diseases in his practice such as hemorrhoids, fissure, fistula, ulcer, itching skin lesions and abscess, are operated upon in the office without pain or detention of the patient from his usual occupation but frequently it is found that, if pain is absent, discomfort,

hemorrhage, constipation or continued ill health have been complacently suffered until some complication necessitates relief.

Recovery from acute disease is always a probability through nature's aid alone, although much can be done to hasten recuperation, lessen suffering and prevent complications, but in chronic conditions physical, medical or surgical forms of treatment are required, however one realizes that these are but the intelligent recourse to nature's means of restoring health. Therefore conservatism by the surgeon rather than radicalism is the more natural method, demanding more skill than the latter but frequently being misinterpreted by the patient who forgets the laws regulating health The patient recoverand its attainment. ing, after operation, rapidly, with little pain, without complications and with good functional results realizes least, as a rule, the surgical skill required, whereas with a long convalescence, pain, serious complications and a less satisfactory outcome, the more satisfied often the individual and convinced that a most dangerous and peculiar affliction has been recovered from. As a means of shortening one third convalescence, after abdominal operations, raising the head of the bed twelve to eighteen inches and soon having the patient in the sitting posture are to be urged, for in addition dangerous operative sequelae, pulmonary complications, gastro-intestinal derangements and interference with liver and kidney functions are thus avoided. But without an understanding of the rationale of such steps the average individual will be unduly alarmed, regarding particularly the strength of his wound which is, however, never injured thereby.

Perhaps there is no disease so dreaded by the physicain as cancer and largely on account of his inability to understand it, while likewise many a patient suffers mental distress from a lack of information upon more simple subjects. Ignorance always tends toward superstition and fear, and these the sufferer can be relieved of, to a large extent, by more exact knowledge. the comprehension of some of the essential facts concerning physiology and hygiene, greater confidence and a rational aspect of the problem of disease, when it occurs, and its treatment, are attained, mental suffering dispelled and chronic disease, causing nervous and physical impairment, made less frequent.

40 East 62nd Street, New York.

"NOTHING BUT A COLD."*

By John B. Huber, A.M., M.D.

THE neglected cold, considering its consequences, is the most serious ailment in existence; could the sum total in suffering, loss of dollars and cents, inconvenience and fatal results (though generally remote) be realized, no one in his senses would say the common cold is a trifling thing.

The common cold leads to many diseases; it predisposes to them by weakening the body, and especially by destroying the functions protective against germs, of the membranes of the nose and throat. Consider only two of these diseases—pneumonia and consumption.

Pneumonia has a death rate often equaling and sometimes even exceeding that of consumption. Pneumonia takes its greatest toll in changeable weather; merely cold weather does not yield many pneumonia cases. Arctic explorers never contract pneumonia—not while at or near the poles. If they do it is after they get back to civilization, where the germs are. The alternating cold and warm days, the windy days when there is plenty of germ-harboring dust—such give ideal conditions for the development of the common cold, the ordinary catarrh; and these conditions are also those in which pneumonia thrives best.

Nevertheless consumption, the Captain of the Men of Death, holds the greatest record for human suffering and human fatality. Pneumonia counts its victims in all life periods—in infancy and childhood and old age as well as at any other time. It is one of the two or three "terminal diseases." But consumption destroys mostly the youth, the wage earner in the prime of life, the mother—men and women doing the world's work. Think of it-from the beginning of history, and probably many centuries before, consumption has been claiming every third or fourth white life between the fifteenth and the fiftieth years; and for several centuries past—that is, since the white man started in to civilize the negro, every other adult negro life.

But how does the common, the neglected cold, lead to consumption, or tuberculosis? Here is an example, a case as instructive as it is typical: A young girl had caught

Everyone knows the symptoms, which begin with the nose and go down until the cold settles on the chest. Sneezing, stuffed up nostrils, headache, coryza, at first dry throat, with difficulty in swallowing and in speaking, cough, chills and fever, alternating pain in the chest and in the bones and joints—from the poison of the infection in the blood. Now this poor girl paid little attention to this "slight ailment;" she felt she could not afford to, because she had to work for a living. She would not, or she could not, in the cruel economic conditions surrounding her, stay at home, go to bed and nurse her cold until her health could be fully restored. neglected this really grave condition until a several-fold tragedy resulted.

Instead of resting at home she kept on working in a shop next another girl, who had consumption. Now this other girl, poor thing, was ignorant and untrained in the prevention of consumption, in what consumptives must do so as not to give the disease to others. She coughed into the air about her working place, and was careless as to the disposition of her sputum. The germ of consumption was thus spread about by her; and naturally any predisposed person sitting and working near her day by day and week by week must eventually become subject to the tuberculous infection.

And this pitiable result was precisely what came to pass. The poor young woman who was letting her cold hang on, became predisposed, as the doctors say, by reason of this neglect. And her catarrhal mucous membranes now provided an ideal soil for the implantation of the consumption germs.

So then, her languor increased day by day; she had no longer her former eagerness for work; she could not as before concentrate her energies upon her task; for the truth is she had little reserve energy to start with, worn out body that she was! Now she was becoming easily exhausted; she was losing weight; she was becoming pale except for an unwonted pink flush; she felt her heart beat rapidly and she was beginning to pant on any exertion. chills became very pronounced; also the fever. She was constantly perspiring; and her cough, which she, poor sick young woman, was trying to believe was a stomach cough, coming from indigestion, was

A Public Lecture, given under the auspices of the Medical Society of the Borough of the Bronx, New York.

becoming persistent and was giving her no rest, despite the syrups and the patent medicines she was using. Finally she found a streak of blood in her sputum; and then, in a dreadful fright, she did what she should have done months before—she went to her doctor who had then, all too late, to tell her the truth.

Now this poor girl was of a family of six. She died. Her father was a drunkard; alcohol easily predisposes to consumption, which he contracted from his daughter; and he died. The mother also came down with consumption, and died. And a strong son of eighteen suffered the same fate—death from consumption. All there was left of that family was a little boy of six years, who had a tuberculous kneejoint, from which he fortunately recovered.

This is the history of a neglected cold; to start with it was nothing but "a cold." And every doctor has to see like cases with really appalling frequency.

Colds seem to be the exclusive privilege of civilization. The human race probably didn't snuffle much until it began to build houses and to wear clothes. The next step toward disease was when houses began to be heated. Then, instead of a glorious, healthy, vigorous battling with the elements, people crowded into these superheated houses; and then they began to get acquainted with colds. Fresh air abounds all over the surface of God's earth, except in the houses which man has built. Not fresh air, but the want of it, is the cause of many diseases. Fresh air, together with sunshine are nature's disinfectants; and none better have ever been invented.

House air that is breathed over and over again soon becomes poisonous; nor is cold air pure just because it's cold—it needs renewal the same as warm air does. "The stove is a mesmerist that plays no small part in the reduction of human beings to a state of idiocy. The mephitic vapors in the atmosphere of a crowded room contribute in no small degree to bring about a gradual deterioration of intelligences; the brain that gives off the largest quantity of nitrogen asphyxiates the others, in the long run." Perhaps you think this quotation is from one of the up-to-date books on hygiene. Not at all. It was written in a novel by de

Balzac, seventy years before our modern systems of sanitation were even dreamed of. Yet it is as sound in science as any statement that has just appeared in print.

In these comfortable and enervating houses people were constantly rebreathing their own poisonous exhalations, mingled with those of their family, the boarders, and such animal friends as they could not bear to see suffer in the raging elements without. Then coughing and sneezing, by which particles of germ-laden material were disseminated helped along considerably.

Next in order came the fetish about night air; so that sleeping rooms were kept hermetically sealed. What air has the good Lord given us to breathe at night, if not night air!

Then people came more and more to overburden themselves with clothes; in which they would collect germs, that would thus be added to the assortments in the house.

A very great element in the catching of colds has been the disturbance of the body's equilibrium through passing from the superheated home, where one gets a perspiration, into the freezing air outside. Healthy living is the constant and right adjustment of internal relations to external relations. Normal relations are thrown completely out of gear by the process just stated.

The common cold is a catarrh. Sometimes there is a nervous element in such suffering. People nervously exhausted—neurasthenic—are apt to get a catarrh in the fall and to not to get rid of it until the spring is well on. Such folk will have a nervous catarrh simply from the apprehension of catching cold.

But most colds are the results of germ-infection invading a run-down predisposed body. Many different germs have been isolated in catarrhal exudates under the microscope. As in all infections, people differ greatly in susceptibility. Many are absolutely immune; don't know what a cold means, however much they are exposed to microbes. Others are constantly snorting and blowing their noses from November to April.

There are misguided citizens who consider the right way to breathe is through

the mouth; others can't help themselves because they have habitually congested and otherwise unhealthy throats. All such people are very predisposed prone to take cold.

Food has a great deal to do with ca-Eating indigestible foods—shell fish, Welsh rarebits and the like; overeating and, on the other hand, not eating enough—these engender the catarrhal habit, through the absorption into the blood and lymph of the poisons generated from undigested or indigestible material. Many a man has got a fatal cold, one ending in a pneumonia, from a too generous meal, helped along with even more generous potations. In such a case there is undue stimulation, followed by reaction with perspiration, which lets the cold air in to chill the vast peripheral sea of blood which courses through the capillaries just under the skin.

All very young children of the poor have more or less catarrh; which would oftentimes not be the case if starches and sweets were reduced in their dietary. It is not so much that they are starved, as that their food is improper for them.

Bad teeth are an enormous factor in the development of colds. It is amazing how many varieties of germs lurk about unclean teeth. Many a cold is got, and many a chronic catarrh is kept up for this reason alone.

It is in every one's experience that there are epidemics of colds. From one case alone practically the whole force of an office, a workshop or a factory, will presently be suffering, and that acutely too. An employee coming into the office sneezing, snuffling, thick of speech, had best be sent home until he is recovered, no matter at what sacrifice; it will be found to pay in the end.

Now, what shall be done to prevent colds and catarrhs?

The first thing to do, in so far as modern living conditions will permit, is to live the physiological life. This is to rise betimes, bathe well, eat slowly three meals of wholesome food a day; be in the sun and open air a great deal; drink generously of water, at least between meals.

One should be very moderate in, and should if possible abstain from the use of alcohol and tobacco. Tea, the tipple of women, is drank a great deal too much.

One should avoid dusty, damp or foul air; should work only in rooms well ventilated; should go to bed early and sleep

at least eight hours; should wear suitunderclothing (wool, or half wool, half all linen) all the year round, thick in winter, thin in the summer. The rewear should be warm and of course charteness that of the day. Woolen so should be worn in bed if the feet are

It is very bad indeed to get the feet Warm footwear and stout, water shoes, preferably with cork soles, sh be worn. Many women will not, bu women should wear "arctics" or so thing of the kind in wet or snowy wea "Put your chest protector on your focover your chest well, of course, but so much that free respiration (upon w good health so much depends) will be peded.

Sleep with the windows wide open. draughts must be avoided for all but very robust; this is easily arranged by the use of a screen or of a clothes !

draped with a blanket.

By living out of doors as much as sible one can do more work without fa and digest coarser food than is possible the man with sedentary habits. Purmeans the greatest possible oxygen tent; and this means pure blood; and in turn means the conversion of ox and wholesome nutriment into a virile healthy constitution.

Plain food is indicated for those catarrhal habit; no starches nor sugar: them, or at any rate these things in me

ation.

A cold sponge on rising is a good to This helps the skin in its important it tions of respiration, secretion and extion. The bathroom should always warm; and vigorous friction with a retowel should follow the ablution. A bath in a chilly room may depress a system; here tepid water should be steated, until one is accustomed to the water. The feeble might stand, while the acold sponge bath, in a tub in which is very warm water up to the ankles.

One may escape colds by avoiding infective agencies. When the papers of an epidemic, cars, theatres and puildings had best be entered as litt possible; the imperfect ventilation in of these structures renders them ho of infection.

Never eat without having first was the hands. Children should be taugh to swap things to eat, pencils or any else, that may be put into the moun.

RURAL SANITATION.

TO IMPROVE RURAL HEALTH PROTECTION.

The need for a division of rural hygiene in the State Department of Health with adequate appropriations, for the purpose of applying modern sanitary methods to rural public health work was strongly urged by Dr. Hermann M. Biggs, State Commissioner of Health at Governor Glynn's conference on Agriculture and Allied Matters held recently in the Executive Chamber, according to the New York State Charities Aid Association. He presented figures to show that while the death rate in the cities of the State had decreased, the rural death rate had increased. The rate up-state increased last year from 15.5 to 15.8 1,000 population. The rate in New York City fell from 14.1 to 13.7 per 1,000 population.

If the death rate in the rest of the State had been as low as the death rate in New York City there would have been 7,975 fewer deaths in the State outside of New York. If the rural and village death rate had been as low as that in New York City the rural portion of the State would to-day be 3,921 human lives richer than it is now.

Rural Health Protection Needed.

Dr. Biggs pointed out that in the country each dwelling house is a unit, just as the city is a unit. Each dweller in the country must provide for himself, water supply and sewage disposal, which the city provides for its residents. Through their health departments residents of the city are afforded health protection in both these particulars, among others, by the application of the results of scientific investigation. Such protection is not now given to rural dwellers but the farmer has as much right as the city resident to the best health protection that modern science affords.

By extending to the country, through a division of rural hygiene, the health advantages so long enjoyed by the cities, Dr. Biggs believes that the death rate and the sickness rate in the country can be very much decreased and the efficiency of the community proportionately improved.

Grange Already Active.

The health situation in rural New York has twice been presented to the State Grange by its Anti-Tuberculosis Committee. Last year the Grange, at the request of its committee, passed a resolution requesting the Public Health Commission to devise

some method by which the advantages of public health nursing might be enjoyed by the rural portion of the State. In response to this request the Commission wrote into the new public health law a provision permitting the employment of public health nurses by town and village health officers.

Grange leaders and others interested in rural problems in this State who attended the Governor's conference, discussed with much interest the facts presented by the Health Commissioner and it is not unlikely that the Grange, at its February meeting in Poughkeepsie, will take some action looking to improvement in rural public health practice.

In discussing the need for a division of rural hygiene in the State Department of

Health, Dr. Biggs said:

"Up to this time the rural districts, not only in this State but throughout the country, have received scarcely any attention from sanitary authorities. As a result we find that sanitary conditions there are scarcely different from those which existed in comparatively early times.

Cities Ahead in Health Work.

"The great cities, notwithstanding their density of population and large percentage of foreigners ignorant of our laws and language, have entirely outstripped the country districts. Not only is the death rate in the country relatively higher than that in the cities but the birth rate is lower.

"New York City's death rate is materially lower than that of the rural districts of the State. Through a long series of years the death rate of the metropolis has been slowly but steadily declining until last year it was 13.7 out of each thousand of the population. On the contrary, in the rural districts not only has the death rate not declined but it

has slowly increased.

"This is the case, notwithstanding the fact that some districts of New York City have a population running from 800 to 1,600 to the acre, that is, there are more people crowded into one acre than there are in some of our up-state villages extending over a square mile. It must be remembered also that this dense population is composed almost entirely of foreigners who have been in this country a comparatively short time, who speak a foreign language and who retain their foreign customs. Last year, in spite of these disadvantages, there was a

decrease in the death rate of New York City of about a half point. In the rest of the State there was an increase of about a half point.

"This means that all of the numerous natural health advantages which the country districts possess, and which should make the rural death rate lower than the city rate, have been more than counter-balanced in the city by the practical application of the results of modern scientific investigation. It seems to me that the time has now arrived when modern public health work should be extended to the rural districts for the benefit of the residents of the small villages and farms."

THE SAN DIEGO EXPOSITION.

Analysis of the "high cost of living," writes Clyde R. Osborn in Harper's Weekly, shows the main causes to be the enormous growth of our cities and the consequent depopulation of our rural communities. The mission of the San Diego Exposition is expected to be instrumental in turning the tide -and that by tangible, convincing demonstrations of the joys, the rewards and the possibilities of rural life to-day. Elaborate outdoor exhibits will illustrate the most successful systems of reclamation, irrigation, pumping and distributing. Modern methods of tillage, farming and fruit-raising in every branch, and the marketing of products as well, will be shown in every detail.

The wonderfully efficient farm machinery that so lightens the agriculturist's burden will be exhibited in actual use. Model farms will go through their daily routine, raising, storing and marketing crops, for the education of visitors. The "Little Landers" will have a farm on the grounds by which it is expected to prove that a single acre properly cultivated will yield a living for the average family.

The principal industrial exhibits will be of exceptional educational value along the same lines; for this exposition will be one of processes rather than of products. For example: The International Harvester Company of America has five acres, on which are being planted alfalfa, grain and an orchard. In the last will be demonstrated their orchard tillage instruments and tractors; on the rest of their ground their hay and grain machinery will be in actual use.

On other parts of the grounds mammoth tractors will demonstrate their plows, seeders, harrows and various other implements in operation. So far as possible, all demonstrators will be required to make active demonstrations, and some of these will be upon a very large scale. The exposition intends to go further than inspiring in its visitors a desire to return to the land. It will show, by huge maps and convincing data, the possibilities awaiting the homeseeker in every part of the United States, the character and approximate value of land in every county and township, and the product to which each is best adapted. scope of this vast text-book of opportunity is national. The Easterner will be shown where, in his own state, there is potential, uncultivated lands. In this exposition (which, though it will be held in the same year as the San Francisco World's Fair, will be in no sense a competitor, but rather a complement), the man interested in producing the great staples of life,—the stockgrower, the farmer, the fruit-raiser, the market-gardener-will find a complete digest of the opportunities awaiting him in this country.

"In short, the prime aim and ultimate object of the San Diego Exposition is to foster the 'back to the soil' movement; first, by actively demonstrating the rewards in health and wealth and contentment that await him who goes back to nature; second, by telling him where he can go with the capital at his command and secure the particular home or type of farm that appeals to him."

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

LEISURE HOUR WAS FOUNDED IN THE BELIEF THAT THE PHYSICIAN IS BUT HUMAN; THAT HE LOWES THE BEAUTIPUL IN THOUGHT AND SENTIMENT AS EXPRESSED IN LITERATURE, AND THAT HE IS AT TIMES SURFRITED WITH TECHNICAL MATTER. SHORT, CRISP CONTRIBUTIONS ON ANY OF THE SUBJECTS NAMED IN THE SUB-HEADING ARE INVITED TO THIS DEPARTMENT.

A CITY AND TOWN PLANNING CONFERENCE.

A VALUABLE report of the recent city and town planning conference held in Ghent, Belgium, by our consul, H. Abert Johnson, gives much valuable information to the sanitarian. Many governments and very many cities, as antipodal as Japan and Chile, as Aberdeen and Adelaide in Australia, were represented. The organizers of the congress believed that, in view of the advancement of civilization, problems of a similar character must be encountered by the administrative departments of all important civic centres; and that the solution of any one of these many complex problems by one city would be appreciable in a general way, at least, to other communities. It was therefore considered highly desirable that all those interested in civic development should assemble for a mutual interchange of ideas and experiences.

The first section of the congress considered: the construction of cities, especially as regards their systematic and progressive extension; the dimensions and directions of streets, especially with reference to the city's traffic; the disposition to be made of vacant lots; the matter of choosing appropriate sites for the erection of public edifices and the harmonious inter-relation of such structures; height of buildings; the extension of railway lines within the city's limits; the different classes of towns and villages-socalled garden cities, industrial or manufacturing towns, summer resorts, farming villages, etc.; the question of the preservation of interesting old quarters of a city; the subject of inducing private owners to take measures to keep intact buildings having any special aesthetic or archaeological interest attached to them.

The congress's second section discussed municipal administration; the judicial systems and procedure applicable to cities; the management of civic finances, including matters relating to the sources of incomes (such as taxes and licenses); salaries of municipal employees; and all questions relating to concessions.

P. Otlet, secretary of the Central Bureau of International Associations, established at Brussels, demonstrated that all municipal activity exercised with a view to improving urban conditions could be divided into three distinct stages: (1) Educating public opinion; (2) stimulating and keeping alive public interest; the expression of "international humanitarian sentiments." Public lectures, he declared, should be given to keep the electorate interested in the subject; these lectures should be organized under the auspices of the International Municipal Bureau.

Dr. Mattey, the delegate from the city of Nice, referred to the question of supplying an adequate quantity of sunlight to the streets and buildings of cities and advocated relatively lower structures and wider streets, since the general health of a city depends, as a rule, on the action of the sun's rays. Dr. Stubben, a German delegate, favored having the streets, especially in the residential sections of a city, run mainly north and south, in order that the dwellings erected on them could have the benefit of the sun's rays on one side of the house in the forenoon and on the other side in the afternoon. M. Rey, an architect of the city of Paris, considered that the regulation of the width of streets was largely an astronomical question, since the object in view was to stimulate the germicidal action of the solar rays; and he set forth the principles that should control the supply of light and ventilation needed by different classes of buildings in modern cities, claiming that an inclined ceiling markedly facilitated the circulation of air in a room. He held that the question of sanitary housing was a matter of vital interest to three-quarters of a billion of people; and that in New York City 349,000 tenanted bedrooms had been discovered into which the direct rays of the sun never penetrated. (There are certainly not that number in New York to-day.) The size of windows and openings, instead of being determined in a haphazard way, should be designed in accordance with the room's dimensions. Especially important is it that kitchen ceilings should be constructed on an incline. And the stairway is a vertical street which should receive the highest possible degree of ventilation, and should be the means of ventilating the apartments in the building. In laying out the streets M. Rey agreed that the sun's course should be the controlling factor; the sun, according to the latitude of the locality, should determine the direction and width of the streets, as well as the height of the buildings.

Professor Hulin de Loo called attenti to a type of apartment houses at a modately low rental, in which each apartme so far as salubrity and exposure to the su rays were concerned, possessed all the avantages of an isolated edifice. Accordito this plan, on a proportionately deep I two parallel sections of the dwelling can erected, with an open space between, clos at one end and resembling an elongated between the branches of which could be ranged an attractive garden or parking This type is largely used in London.

FISH FOR BEEF.

DR. CARL ALSBURG, the head of the Bureau of Chemistry of the Department of Agriculture in Washington, is strong for overcoming our national prejudice against certain fish that are plentiful and in many cases are used freely by other countries, according to Honoré Wiltse in Harper's Weekly.

Why eat the oyster and spurn the sea mussel? In Europe the latter is eaten in vast quantities; is delicious too. It should take no more courage to eat the first mussel than the first oyster.

Then there is the dogfish. It belongs to the shark family and its favorite diet is lobster. We call it the dogfish just because it doesn't resemble a dog. The lobster is threatened with extinction—unless man can be persuaded to eat the dogfish. Its flesh is very sweet and delicate, and it can be cut in steaks like the cod. Besides being a splendid food the dogfish so abounds on our coasts that it should be used as a fertilizer also. The oil from its liver is as good as cod liver oil.

The sword fish is eaten in Mediterranean countries; his flesh is peculiarly tender and well flavored.

The big pectoral fins of the skate are such good eating that great quantities of him are sold in England and France and Italy. The Italians in New York City demand him. He grows abundantly on our coasts.

The squid is a soul-terrifying creature,

with a rolling, prominent eye, with eight ten arms furnished with suckers and an i bag to bemurk his enemies with. Yet so southern peoples have found his tentacl roasted, to be excellent.

Abalones abound on the Pacific coa whilst Americans do not eat them Chinese devour them with gusto. As a m ter of fact the Abalone stands close to oyster in food value.

The oyster is in many ways the print of sea foods; a quart of oysters conta about the same food value as a quart milk or three-quarters of a pound of be

As regards the relative value of sea fo and meat the only considerable difference in the fat which goes with the meat. F and meat are about equally digestible, takes about six pounds of sirloin steak; about an equal amount of codfish to furr a pound of protein, and cod is about a teen cents a pound where sirloin costs the cents. Herring has the same nitrogen value as pork, and mackerel nearly as much.

There is no warrant for the popular tion that fish is a brain food because of phosphorus in it. Fish have no more pl phorus in their flesh than other food mals; nor is phosphorus, anyway, any n essential to the brain than nitrogen or po sium or any other element.

The Bureau of Chemistry is startin campaign regarding the packing, marke and refrigeration of fish food that has u now been little investigated. Many facts will be forced on fishermen and the public. For instance:

Fish caught by gill nets and allowed to die slowly under water decompose easily, as also do fish landed alive and allowed to die slowly. Fish killed immediately after catching keep the best and their flavor is better. Fish should not be kept at a temperature over 25 degrees F.; but oysters should not be frozen. Oysters deteriorate very rapidly when taken from the water, especially when in spawn; though they are considered very palatable when in spawn.

The fear that the oyster is a source of disease and is not a safe food is undoubtedly a factor that adds to the high cost of living. Oysters should be plentiful, cheap and much eaten. The great bulk of those sold are wholesome; the number of beds where pollution is even possible is small indeed. Thousands of acres of shallow waters are available all along our seaboards for oyster beds and the oyster producing possibilities of the Gulf States have scarcely been touched.

The Department of Agriculture is going to deal with the oyster situation in a new and constructive way. Under the old way shippers of inferior oysters were punished; but nothing was done to help producers keep oysters wholesome. The first thing that will now be done will be to learn what beds from Cape Cod to Texas are polluted; then interstate commerce from these beds will be controlled—and such publicity will prevent local sales.

It will next be seen to that the oysters from wholesome beds will be handled in a sanitary way. Thus should public confidence be restored, and the oyster industry will increase and do its share toward making up for our beef loss.

Dr. Alsburg's ideal is not to stop with punishing the offender. People must be protected, of course, from tainted oysters. But in getting after the wrongdoer, the chief proposes to aid all the producers of wholesome oysters to increase their business. This idea of helpfulness and co-operation will go a long way toward increasing not only the oyster business but the fish industry in general.

WISDOM OF NIPPON. The following Japanese advice, which teaches how to live to be 100 at least, was published in the Jifi Shimpo:

Arise and retire early.

II. Sleep six to seven hours daily in a room perfectly dark and with open windows.

III. Spend as much time as possible in the open air.

IV. Eat meat only once a day.

V. Drink moderately tea and coffee and do not smoke or drink.

VI. Take a warm bath every morning. VII. Give up silk garments for woollen

VIII. Rest one day a week and in that day do not even read or write.

IX. Avoid warm places, especially those heated artificially.

X. Re-establish your exhausted organs with identical animal organs.

XI. Avoid getting excited and do not fatigue your intellect.

And the twelfth commandment is the most interesting one:

XII. If you are a bachelor get married without delay; if you are a widower contract a second marriage immediately.

ORIENTAL NOTES.

Nor long ago the French government undertook the collection of vital statistics and general information as to the sanitary status of certain of the European and Asiatic provinces, and for the purpose forwarded to the authorities of these provinces blank forms—questionaires—accompanied by the usual polite note requesting that the data be supplied thereon and returned to the statistical bureau in Paris.

The pasha of Damascus promptly replied to the questions asked as follows:

Q. What is the death-rate of your province?

A. It is the law of Allah that all should die—some die young, some die old.

Q. What is the annual number of births?

A. Allah alone can say. I do not know

and hesitate to inquire.

O. Are the supplies of water sufficient

Q. Are the supplies of water sufficient and of good quality?

A. From the remotest period of time no one in Damascus has died of thirst.

Q. Give general remarks as to character of local sanitation.

A. A man should not bother himself or his brother with questions that concern only Allah.

HOME, SWEET HOME.

On one of the most frequented thoroughfares in Manhattan and on a corner considered the busiest in the world there is a picture shop which has in its windows always a number of attractive paintings. All sorts and conditions of men, women and children, those native to the city, and those far greater thousands that have left farm, hamlet, village and town throughout our States and territories to make their homes in New York, pass and repass that corner: as well as those who have immigrated hither from places on the earth as far apart as Alaska's icy mountains and India's coral strands, Occident mingling with Orient-all to try their fortunes and live their lives as best they can, how oftentimes with bitter struggling and heartache, in our mighty cosmopolis. Ordinarily the passerby stops to look at these paintings and goes on, not obstructing the way. But at this writing the corner and the avenue are obstructed—nay, one might almost say the traffic is stopped. And all on account of a painting now being exhibited in that shop. It is not isolated, this painting, nor large; but with comfortable confidence takes its chance of being noticed with others in the

same show window. No, it is not September Morn, nor any other nude, though such are also to be seen there; nor a landscape or seascape; nor something historic, nor a poem in colors; nor any futurist abomina-What the people are so hungrily feasting their eyes upon is just a painting of an humble little cottage, done by a man, you may depend on it, who has "been there," and was brought up in the like of it—so sympathetic is his portrayal. cottage is snugly ensconced by a country roadside. Outside is bleak night. everywhere, the road covered with it, the boughs of the trees laden down with snow; and above pitchy darkness. But smoke comes from the chimney; and there is light in the window, a generous redness suffusing the little individual panes, even through the snow that has drifted upon them. And the door is opened wide, to admit the homecomer into the welcoming warmth-so wide that the burning logs on the hearthstones project their heartening glow clear across the road and upon the beeches beyond. No wonder this picture is popular-and is contemplated, with what yearning, and pang and remorseful reminiscence in many an onlooker.

NIGHT LILIES.

I love to watch in the early gloom, Over the roofs as night draws nigh, The twinkling gardens of lights abloom.

Lilies of night in a shrouded sky, Gleams of silver, glimmering gold, Airy blossoms awave on high.

Bursting in bowers, suspended, shoaled, The mystic soul of the night aglow, Light and beauty, things to hold

The heart in tune as it throbs below.

—Emma Playter Seabury.

I have loved the feel of the grass under my feet; and the sound of the running streams by my side. The hum of the wind in the tree-tops has always been good music to me, and the face of the fields has often comforted me more than the faces of men. John Burroughs, Atlantic Monthly. "ALL the time, too, he was getting the very most he could in the way of outdoor exercise. No doubt this was the secret of his splendid and prolonged physical health—that he never allowed himself to become the mere member of parliament, or the mere student, but that he always remembered that he had fibres and limbs to keep in healthy, vigorous action, and that whenever there was a chance of outdoor exercise he was a man to get it and to enjoy it."—Justin McCarthy, regarding Gladstone.

PROFESSIONAL COURTESY.

"This poem was written by a prominent doctor of this city. Has it any value?"

"About as much value," said the editor, "as a medical opinion written by a poet."—Washington *Herald*.

THE CHORUS GIRL.

PEOPLE like to make chorus girls the target of cheap and oftentimes coarse wit. Anybody who knows much about their lives will find little in them to joke about. They have to work harder on less pay than anyone else concerned in the preparation of musical comedies; shows are rehearsed in August and September for the "season"; for these rehearsals, in the hottest weather they get no pay. For several weeks from nine in the morning until long after midnight, with brief intervals for a hasty meal, the chorus girl is under the lash of the manager's tongue. She starts at the stroke of the conductor's baton, just as any sprinter does at the pistol's crack; doing this many times a day would wear out anybody's nerves. Then, when the show is on, there must be frequent and quick changes of costume in cold dressing rooms. that are laden with talcum and other kinds of dust, and never properly aired. When the show loses its drawing powers, and goes on the road for one night stands, in all kinds of weather, the theatre accommodations are hardly better than those of stables; cheap boarding houses furnish the food: and this is not telling one-half the hardships.

Most chorus girls know so little about voice training that they constantly strain their voices; and they have sore throats pretty much all the time. For relief they get at the nearest drug store medicines and

lozenges containing cocaine, opiates and what not else that is dreadful. What sadness that kind of thing leads to only doctors can realize. The chorus girl is constantly suffering from colds, one after another; and what the neglected cold leads to in most cases everybody knows, or ought to—consumption. Then comes the time when her face thins, her cheeks take on an unnatural flush; her looks are not so profitable to the management as they used to be. Her voice gets beyond her control; she takes to "faking" her part. Some morning there is a sharp crack of the conductor's stick; the chorus stops; she is pointed out and told she is "off key." The erstwhile pride of the Johnnies, the queen of the first row, is sent to the rear. There now comes that persistent, dry, hacking cough—of course it would never do to disturb the show that way. The audience is there to be amused, not to be annoyed. So one night after the performance, the manager calls the delinquent aside, sarcastically suggests to her that she is too good for his show; he hates to give her up, but his conscience won't let him keep her out of grand opera. Funny!

Behind the glamour of the footlights there are miserable shadows that no one in front would suspect. Young girls with any ambition to be in the chorus had better find out all about the life before making application.

FOR THE HONOR OF THE LAND.—"Do you see how substantially he's doing that?" said Kipling. "That should be interesting to an American who is used to seeing things done in a hurry. But here in Sussex they build for the ages. Once I asked a man why he ploughed so deeply, and I asked this mason why he went as far down as five feet for his concrete foundation, when two or three feet would do, and they both made the same answer—a phrase that I have learned since is commonly in use in Sussex, like an adage or a motto: 'We do it this way,' they said, 'for the honor of the land.'

"I thought that had a fine sound—a deference to the soil that nourishes them, like a son patting his mother's cheek."

The Union Station in Pittsburgh has had a waiting-room especially prepared for immigrant girls where they may meet their friends and be safeguarded from any possible dangers.

For further protection to the girl who, it has been proved, so often falls a victim to the "white-slaver" a matron wearing an official badge and speaking several languages will meet all the incoming trains. The Woman's Club of Pittsburgh is pledged to pay her salary for three months and the Young Women's Christian Association for another three months.

If the experiment proves successful, an organization on the plan of the Traveller's Aid Society in Philadelphia, with officials at all stations and wharves, will be formed.

OUR ESTEEMED CONTEMPORARIES.

WE FALL IN LINE.

LINES OF GREAT MEN.

O Bidiah McNamee, Who quit this world when 63— Although his children numbered six Related not their baby tricks.

–Wilmington News.

Ebenezer Fiddlesticks Took the count at 66-Never made himself a pest Claiming olden times were best. -St. Louis Post-Dispatch.

Hezekiah Conamore Reached the age of 84 Ere he told of his renown When he spelled the whole school down. -Denver Republican.

Jeremiah Phipplegate Died, beloved, at 98; Never mourned the world's decline When the household slept till 9. -Evening Sun, New York.

Nebuchadnezzar Fulloffun Lived until 101; Never said that "Stopacoff" Prevented him from shuffling off. -Jour. Am. Med. Assn.

Billy McGee died at 103, As hale and hearty as could be. In life he had but one regret, That he had never seen THE GAZETTE.

Old Beeswax lived to 107. And all were sure he was bound for heaven. From birth to death he was always well, Not a day in bed, nor felt like the old Nick. —The Dietetic and Hygienic Gazette.

IT NEVER HAPPENED.

Young Jones, cub reporter on the Cinnaminson Scimitar, was the hero of a tale told by D-Cady Herrick at a luncheon. Jones wound up an account of a town meeting with the following words:

'Mr. Smith then rose and made a few feeble remarks, during which the audience

dispersed."

When the editor of the Scimitar saw this sentence, he dashed his blue pencil through it, and substituted the following:

"The last speaker was our eminent fellow-citizen, Mr. George William Smith, who, in crisp and well-chosen sentences, reviewed the subject under discussion, giving to it that clear, well-considered, and logical treatment which has made Colonel Smith one of the foremost orators of our State. The audience dispersed, after expressing warm approval of his polished and eloquent utterances."

"There!" exclaimed the editor. "That's

how to do it."

The reporter was not convinced, or even silenced.

"The difference between our versions, sir," he commented sullenly, "is the difference between the true and the false."

"Not at all," snorted the editor. the difference between old Smith stopping his paper and cutting me out of seventy cents a year, and coming in here and buying a hundred marked copies to send round to his friends."

CLIPPINGS FROM THE LAY PRESS.

"On account of the crowded condition of our columns, a number of births and marriages were postponed last week.-Bloomfield (Ind.) Democrat.

"Madame Stringfield, the expert corsetière, will arrive this afternoon from Huron, where she has been demonstrating the Gossard corset for a week back."—Yankton

Press.

"Wanted-Nurse to take charge of two boys, experienced, between thirty and forty."—Chicago Tribune.

"Mrs. J. L. Park left for Paris to-day, where she and her husband, from whom she has been separated for some months, will again take up the battle of life."—Oakland (Ill.) Messenger.

FROM THE WILLIAMSVILLE ITEM.

"We wish to apologize to Mrs. Orlando Overlook. In our paper last week we had as a heading, "Mrs. Overlook's Big Feet." The word we had ought to have used is a French word pronounced the same way, but spelled fete. It means a celebration and is considered a very tony word.

Editor—Here, you'll have to postpone Jones' death and put off the birth of Flannigan's twins till Saturday. There's a patentmedicine advertisement just come in \(\subseteq \Syd-\)

ney Bulletin.

BOOK NOTICES.

APPLIED BACTERIOLOGY FOR NURSES. By Charles F. Bolduan, M.D., Assistant to the General Medical Officer, Department of Health, City of New York and Marie Grund, M.D., Bacteriologist, Research Laboratory, Department of Health, City of New York. 12mo of 166 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$1.25, net.

Bacteriology dominates a large part of the nursing art. A correct understanding of the more important principles and facts of that science is presented in this excellent volume. All the ordinary modes of transmission of infection are described. Valuable suggestions for teachers in bacteriology for nurses have been added to the chapters.

Manual of Medicine for Nurses. By George H. Hoxie, M.D., Physician to the German Hospital, Kansas City, Mo., and Pearl L. Laptad, formerly Principal of the Training School for Nurses of the University of Kansas. Second edition, rewritten and enlarged. 12mo of 351 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$1.50, net.

In this edition the material has been rearranged. There has since been much demand for the work among nurses. Technical phraseology has been avoided or explained wherever it seemed likely to befog the lay reader.

- A REFERENCE HANDBOOK FOR NURSES. By Amanda K. Beck. Graduate of the Illinois Training School for Nurses. Third edition, revised and enlarged. 32mo of 229 pages. Philadelphia and London: W. B. Saunders Company, 1913. Flexible leather, \$1.25, net. In this edition Amanda K. Beck has brought her work admirably "up to date." Considerable new material has been added.
- A REFERENCE HAND-BOOK OF GYNECOLOGY FOR NURSES. By Catharine Macfarlane, M.D. Gynecologist to The Woman's Hospital, of Philadelphia. Second edition, thoroughly revised. 32mo of 156 pages, with original line-drawings. Philadelphia and London: W.

B. Saunders Company, 1913. Flexible leather, \$1.25, net. The principal changes in the second edition of this superb work pertain to details of technic. The sections on the preparation for and after care of major operations in gynecology have been largely rewritten. Most admirable are the illustrated lists of instruments needed for given operations.

THE OPERATING ROOM AND THE PATIENT.
By Russell S. Fowler, M.D., Chief
Surgeon First Division, German Hospital, Brooklyn, New York. Third
edition rewritten and enlarged. Octavo volume of 611 pages with 212
illustrations. Philadelphia and London: W. B. Saunders Company, 1913.
Cloth, \$3.50, net.

The principles of simplification and standardization have been well maintained in the third edition of this superb work; many earlier methods have been discarded for others which experience has proved more efficient. The following fundamentals to successful surgical procedures have been well set forth: Careful anesthesia. exact hemostasis, asepsis, rest of the injured part, use of the remainder of the body, feeding advanced to normal as fast as the anesthetic-weakened stomach can take care of it, and insistence on the general rules of hygiene.

CAUSES AND CURES OF CRIME. By Thos. Speed Mosby. Illustrated, p.p., \$2.00. St. Louis, C. L., Mosby Co., 1913. The cost of crime in the United States now amounts to one-third the total cost of the government; and the burden is yearly increasing. Mr. Mosby's book is authoritative on the subject the importance of which amply justifies this volume.

LORD LISTER: HIS LIFE AND WORK. By S. T. Wrench, M.D. (Lord). New York: Frederick A. Stokes Co.

The life and work of the late Lord Lister affected man's relation to sickness and disease more fundamentally than the work of any other philosophic physician devoted to the problems inherent in those phenomena. Lister was far more than a surgeon, far more than the founder of modern anti-

septic surgery. He was a great philosopher whose thought never deviated from the central problem of life—the mystery and quality of inhality. Dr. Wrench's work will be found most absorbingly interesting.

A HANDBOOK OF THE PEOPLE'S HEALTH. A Textbook of Sanitation and Hygiene for the Use of Schools. By Walter Moore Coleman. Illustrated by Retta Carroll, Alfred Seiler, and with many Photographs. New York: Macmillan Company, 1913.

Coleman has admirably reduced our recently developed public health measures to a simple code, comprehensible by pupils and brief enough to be managed in a single school course.

ROMANTIC LOVE AND PERSONAL BEAUTY; Their Development, Causal Relations, Historic and National Peculiarities. By Henry T. Finck. New York: The Macmillan Co. \$2.00.

This most charming book by the musical critic of *The New York Evening Post* is cyclopedic on the subject of which it treats. No one desirous of marrying, as every youth and maiden ought to be, no married people and no parents having children who will soon be marriageable should fail to peruse this book. Only searchers after the salacious will be disappointed.

PRIMERS OF SANITATION AND OF HYGIENE. By Prof. John W. Ritchie.

FIRST BOOK OF HEALTH. By Carl Hartman, B.A., M.A., and Lewis B. Bibb, B.A., M.D.

THE HUMAN BODY AND ITS ENEMIES. BY Hartman and Bibb.

These four books are published by the World Book Company, Yonkers, N. Y. A large measure of their educational value lies in their many graphic and informing illus-Their indices are also exhausttrations. ive—an important feature in such books. Several years ago, when this reviewer gave a series of popular health talks he found the Primer of Sanitation a most useful book, and unblushingly appropriated no little of it for his lecture purposes. He found the language terse, the facts accurately stated and the information vital. The remaining books above mentioned appear to have these characteristics.

DIETETICS FOR NURSES. By Julius Friedenwald, M.D., Professor of Gastro-enterology in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Third Edition, Enlarged and Revised. 12mo volume of 431 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$1.50 net.

This book, by the author of the masterly larger work "Diet in Health and Disease," should be the nurse's vade mecum. Not only has the feeding of the adult sick from various diseases been well considered, but infant feeding is also set forth succinctly, and rectal alimentation with the feeding of operative cases has been fully dsecribed. Diet lists are added; and there are instructions to enable the nurse to comprehend and to carry out intelligently the doctor's orders.

PROBLEMS OF GENETICS. Silliman Lectures delivered at Yale University, by William Bateson, M.A., F.R.S., Director of the John Innes Horticultural Institution, Hon. Fellow of St. John's College, Cambridge, and formerly Professor of Biology in the University. 8vo. Two colored plates, diagrams and illustrations. \$4.00 net; postage 25c. extra. The Yale University Press, New Haven, Conn., and New York.

The purpose of Professor Bateson's superb lectures was to discuss some of the wider problems of biology in the light of knowledge acquired by Mendelian methods of analysis. A working knowledge of Mendelism (such as Prof. Bateson provides in his book, Mendel's Principles of Heredity) is necessary to an understanding of such Problems of Genetics as: Species and Variety; Meristi c Phenomena; Segmentation, Organic and Mechalical; The Classification of Variation and the Nature of Substantive Variation; The Mutation Theory; Variation and Locality; The Effects of Changed Conditions; The Causes Genetic Variation; The Sterility of Hybrids.

A community which has no means of knowing with what contagious diseases it is afflicted, nor how many cases there are, nor where they are, is helpless to protect itself, and unnecessary sickness and death will result.—Assistant Surgeon-General Trask.

tο

m

M

tŀ

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M. D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

HOW THE FOX FAMILY SAVED TEN DOLLARS.

Some one has recently observed that most people like to be born at home. Indeed that is where most of us were born. Now this is the story of a nice little baby who was born at home, and as it is vouched for by all his "folks" and one doctor and one Nurses' Employment Agency, we know it must be true.

If little Jim Fox had been born on the day appointed for his advent this story would never have happened; but Jim took it into his mind to come fully three weeks ahead of schedule time, and there was great surprise and much ado—and the doctor! The little home was spotless and neat, with all the freshness that a new home puts forth, before children have come on the scene and the new mother has to divide her time between the house and the cradle. But the Foxes were unprepared. Dismay was on the face of the mother-to-be and the nearest neighbors were called into council. Where was the nurse?

Now Mrs. Fox had months before confided their expectations to the family nurse who had endeared herself to the whole Fox tribe by her gentle services at previous visitations of the stork. Her coming had brought confidence and security on these occasions and the new home would be well tended with her in charge.

But the old nurse was occupied with another arrival to-day. She simply could not come. It wasn't time!

So it happened that while the doctor was busy in helping little Jim to arrive, the husband and his counsellors were busy at the telephone sending urgent appeals to all the "good" nurses they could think of under these trying circumstances. The doctor said "Better get a trained nurse," and mentioned a few of his true and tried. But Mr. Fox reminded his improvised council that his income was only a neat fifteen per week and he couldn't just then figure out

how to pay a nurse twenty-five and have a balance for rent and food—and really we must admit that he was too flustered just then to work out such a problem in the long division of fifteen "plunks," as he called them. Besides, his "old faithful" to whom he had committed the fate of mother and boy and house could meet all requirements cleverly and only wanted twelve a week. In vain did they appeal to every "practical" nurse that their collected brains could conjure from the eventful past. They were all busy, as usual.

At last, and in despair, they rang up Mrs. Grudge's reliable Agency and turned over the "case" to her tender mercies, charging her solemnly to send her very best nurse for which they would go to the length of paying full fifteen per week. In ten minutes the 'phone told the welcome news that Mrs. Root would be on her way in an hour. At this point in the narrative little Jim announced his arrival by a series of lusty yells and in a few minutes the doctor placed him in the arms of the senior lady counsellor.

Promptly in two hours Mrs. Root arrived in all the glory of a red taxicab (\$2.00 extra) and proceeded to make herself at home. She "didn't bring nothin' along but just clo'es" because she came in such a hurry, and she "cal'lated the doctor would have all the fixin's ready that was nes'sary." The senior counsellor graciously resigned in her favor, the neighbors departed, all, and the little home was delivered over to her keeping for "a week or two."

Within a couple of days Mrs. Root had demonstrated her versatility and had gone the limit. She couldn't get the run of the kitchen and pantry well enough to set the meals for Papa Fox, but managed to find plenty for her own "eating." Mr. F. found it convenient to take his breakfast on the way to his work, and pick up a supper on

his way home. The new nurse had no difficulty in proving that she was "not much hand to fix up things for sick folks," and the good women of the neighborhood kept the young mother supplied with the little delicacies that she relished. Anon Jim's wardrobe began to show a pitiful deficiency of those useful articles known as "squares," and a midnight search of the cellar revealed to Papa Fox a mound of these conveniences. Mrs. Root promptly confessed that she was the mound builder and explained that these and sundry other soiled articles were awaiting the coming of the "wash-lady" next Monday (a mythical personage, by the way, in the Fox household). Mrs. R. had inadvertently forgotten to inform the family that as she had "rheumatics quite bad in both wrists" she couldn't bear her hands in water any length of time; that was why she didn't wash the baby "all over," and that may have been why one of the lady counsellors happened along about the middle of the afternoon to wash up the breakfast and dinner dishes from which Mrs. Root and her patient had eaten. Papa Fox's hands were strong and tough, and that night while others slumbered he took two hours off and taught himself the laundry business with the result that the growing mound of soiled linen was. by much toil and perseverance, converted into a line of bedraggled "baby fixin's" which stretched three times across the kitchen.

Being of a quiet nature and little disposed to disturb the peace of others, the worthy Mrs. Root observed her periods of rest with studied regularity, especially in the forenoon, before her dinner and in the afternoon, before her supper. While taking the rest cure, she bore the ordinary disturbances of the household with remarkable fortitude, rarely suffering them to interrupt the serenity of her repose. Others, marvelling at the depth of her abstraction. tried in vain to learn the secret of her wonderful imperturbability. One afternoon the next-door neighbor was doing the dishes in the kitchen, the senior counsellor was straightening up little Jim and putting the bedroom to rights, and the much-enduring Mrs. Root was "restin' up" on the spare bed. All at once the new mother said she guessed she was going to faint, and her attendants went scurrying around for the household restoratives. The decanter of wine which "the boss" sent them for their

first Christmas was produced from the top of the sideboard—empty! The quart of whiskey, so thoughtfully provided by Papa Fox as an insurance against such casualties as the present, was requisitioned—all gone! Finally the pint of kimmel, brought by "the German lady" to soothe Jim's colicky stomach was confiscated—nary a DROP!!

The new mother didn't faint. She sat right up in bed! "I feel like swearin'," she testified; and the neighbors vowed that she looked smarter than she had been for a month

That evening the worthy Root showed her first signs of peevishness. Her hands ached her awfuller than ever and she had to go to the drug store to fetch some medicine for her head before bed time. In her absence the council once more convened as by common consent and collusion and, a quorum being present, went into executive session. It was a time for action, not for criticism or censure. "This aint no retreat for bums," said Papa Root, hotly. "Nor for spongin' females," added the senior counsellor, with an outraged air. The decency of the neighborhood had been violated and there was just one thing to be done to redeem their good name. A committee of ways and means was at once organized with an enthusiasm that guaranteed the comfort of Jim and his mother for an indefinite period in advance; another committee of one kindly volunteered to relieve the man of the house of a disagreeable function—it remained for her to break the news to the worthy Mrs. Root that her services were no longer required, with the gentle hint that she "might go and get her booze off of somebody else." Incidentally it was calculated by one of the wisest economists present that the nurse had actually performed about seventy-five cents worth of service in five days. On this basis Mr. Fox calculated he could save two dollars more than the ten already saved by paying her off in full and getting rid of her before she had "et up her full time."

Here we let the curtain fall, merely remarking that this little story would not be worth the telling, true as it is in every detail, if the selfsame comedy were not running every day and every night in the year, with variations, in all our large communities. While we talk big things among ourselves about "efficiency" and "conservation" and all that sort of stuff we overlook

the most ordinary details of economy and humanity and permit the poor to rob the poor in the same old way.

There are lots of things to think about in a little narrative like this; but we are not going to moralize now. We have tried to expose one of the roots of the trouble. When we, the people, get ready, we can, if we will, organize our social forces in the interests of the thrifty poor, so that they will not be caught in the trap that their own thrift has laid for them.

NURSING VIEWED AS A PROFESSION.

It appears to be the most futile of all distinctions to classify as between "paid" and "unpaid" art; so between paid and unpaid nursing to make into a test a circumstance as adventitious as whether the hair is black or brown, viz.: whether people have private means or not, whether they are obliged or not to work at their art or their nursing for a livelihood. Probably no person ever did

that well which he did only for money; certainly no person ever did that well which he did not work at as hard as if he did it solely for money. If by amateurs in art or nursing are meant those who take it up for pay, it is not art at all; it is not nursing at all. You never yet made an artist by paying him well; but an artist ought to be well paid.—FLORENCE NIGHTINGALE.

THE SEELEY BILL.

We can not endorse the proposed legislation in favor of the New York State Nurses Association because it attempts the impossible feat of legislating a word out of the vocabulary—an old word, at that, and one which everybody uses freely. If the organization feels the need of a term to use for its very own, it will have to select one which has not gained currency everywhere—in the state and outside the state and wherever English is spoken.

We see no way out except to coin an en-

tirely new word and get a copyright on it. We would respectfully suggest to the New York Assembly the word nosocoma which is the old Greek name for nurse. It lends itself easily to the formation of adjective and adverbial derivatives—amply enough to cover the whole nosocomical situation.

We do not want to discourage any good endeavors of the R. N., but we predict that as long as they use the word *nurse* they will have to share it as they do now with a host of other people.

HOME NURSING BY THE PROBATIONER.

THE Canadian Nurse says:

It seems to us absolutely and entirely wrong and blameworthy to send out pupil nurses to earn money for the hospital. Is there any possible excuse for such procedure? The nurse gives her services to the hospital that she may in return receive an adequate training, practically and theoretically, that will fit her to care properly for the sick under all conditions, and to cope with any emergency that may arise in this work. Is the hospital fulfilling this obligation—for it is surely an obligation—when the pupil is sent for weeks at a time to care for private patients outside? To make the thing more glaring, the hospital boasts of the money its pupil nurses have earned. Is this right? Is this just to the

pupil nurses? Are they getting the education for which they are paying, not in dollars and cents, it is true, but in service the very best, the value of which cannot be reckoned in dollars and cents?

This is an easy question because the answer is contained in the query. There is a "possible excuse" and a very good one. Necessity is the excuse. Read the question.

Now read the answer: The nurse gives her services to the hospital that she may in return receive an adequate training, practically, that will fit her to care properly for the sick under home conditions, and the hospital would fail of its ends if it did not send the pupil for a period of service, in the home. Private nurses are sometimes misfits because the hospital that trains them does not take the time or trouble to acquaint them with conditions as they must be met in the average home.

Where learn home nursing better than in the home? What time is better for learning home nursing than that time in which they are pupils? Shall they wait until they are graduated and registered and then pick up this special form of knowledge by repeated experiences and trials?

As to whether the home pays the hospital or not, we cannot see that it matters to the nurse in training. The real question should be: Does the nurse render efficient service—properly supervised—to the home, and is she receiving in return adequate training in home nursing? If not, the arrangement is unfair

Now ask us something hard.

GLIMPSES OF A WEST AFRICAN CLINIC.

THIS brief quotation is from Miss Janette Miller, a teacher who is associated with a doctor and a trained nurse, his wife, in Mission work at Angola, on the Atlantic coast of Africa. What a field for the resourceful woman.

We quote from the Missionary Herald:
Much of my time since Dr. Moffatt left is spent at the dispensary. It takes about two hours every morning, when I am alone. I thought crowds would not come when the Doctor is gone, but the people will get sick

and they are used to my helping the Doctor. One dropsy patient will do well if he lives till the Doctor's return. I know what he needs, but I wish I could keep him till Doctor can be here at the crisis anyway. I tap him every week. Another man has a window in his jaw from not cleaning his teeth, and there is a lot of ankylostomiasis and some "big head," which is a peculiar tropical disease of sores in mouth and nose.

I've been carefully taught, but you can think how glad I am that Mrs. Moffatt is here to share the responsibility. I am glad,

too, that she is a trained nurse.

FIRING THE FURNACE OR THE NURSE?

What Next, inquires the American Journal of Nursing as a caption to the following editorial. We think the next thing is for no nurse to attend a case without a frank understanding of the duties expected of her, both possible and impossible. Most of our trouble with other people of the genus homo is due absolutely to lack of mutual understanding. We agree entirely with the Journal:

The point of view of people on the outside, or of the medical profession, is always interesting. We have become accustomed to being told that the nurse should perform all the duties of cook, laundress, chambermaid, housekeeper, etc., but the last criticism which has reached us was from a member of the medical profession who did not want a certain nurse again because "the little fool let the furnace fire go out," and suggests that janitor service should be added to her other duties.

We always claim that there is no house-hold emergency that a nurse should not be

ready to meet when occasion requires that she should do so, and that she should be willing to do in another woman's house what she would be willing to do in her own, under the same conditions. The care of a furnace, under modern conditions, is not specially arduous, it is undertaken by many women in their own homes, and is regularly required of many servants. Rather than let the fire go out, we would say it would not be unreasonable to expect a nurse to put on a few shovelfuls of coal, but that she should be expected to regularly care for the furnace, in addition to her duties in the sick room, and that her ability to care for the sick should be measured by her ability to care for the furnace is, we think, going one step beyond reason.

We have known doctors who could make beds and give baths in an emergency, and we can imagine such a man being glad to attend a furnace rather than allow a patient to suffer, but he would certainly consider it unreasonable in a family to refuse to call him a second time because he failed to perform any one of these duties.

ANTITOXIN TEN YEARS AGO.

THE GAZETTE for March 1904 contained the following significant comments on certain statements made by Dr. Cyrus Edson:

Dr. Edson speaks of the "honor of having found the antitoxin of diphtheria." Is this "honor," then, well and securely founded? I have before me the July 15, 1900, issue of a medical journal, *Pediatrics*, of New York City. In it is described a meeting, held April 9, 1900, of the Medical Association of the Greater City of New York, at which a discussion of this antitoxin took place. Drs.

Winters, Rupp and Herman (who have for years been investigating the antitoxin) came forward with overwhelming proofs of its uselessness and injurious effects. Dr. White said he had "never seen a case of diphtheria cured by antitoxin." The president, Dr. Weir, said, "none of the serums had proved satisfactory." And only one member could be found who would defend it.

To-day the physician who refuses to administer antitoxin in a case of diphtheria is considered little better than a criminal.

MUNICIPAL TRAINED NURSES AND THEIR VALUE TO THE COMMUNITY.

By Samuel Horton Brown, M. D., Philadelphia, Pa.

WITH the increase of paternalism in connection with the Federal Government, the several Commonwealths, and the first class Municipalities in America we have witnessed the development of practically Governmental Medicine, although not as yet recognized as such. With this has been developed a high class of Social Service Work, which has been entrusted to salaried Trained Nurses presenting satisfactory credentials.

Organized Charity and the Collegiate Instruction in Sociology have made it imperative that an investigating bureau be attached to all philanthropic enterprises. The question of organized charity is open for discussion, but since we have granted the existence of the same, we must all concede that the investigation department, known usually as the Social Service, is absolutely necessary.

Unfortunately philanthropic enterprises, as a rule, feel that it is necessary to maintain complete individual organizations and plants for obtaining information and disbursing charity, or whatever it is they call it, to their dependents. An interchange bureau is in existence in but very few communities.

The Social Service is made up of trained workers, so the reports always read, but from comparatively close contact with the workers in the field we find the instruction is about as valuable as the geography we were taught in the lower grades of the Grammar school. While the work is fraught with interest to the young

college girl, the lay mind is never prepared to meet many of the contingencies that arise nor to make proper allowances. The social worker works to the best advantage if she be a trained nurse, or a physician, or a medical student.

This can best be understood by a short recital of the work of the nurses employed by the City of Philadelphia in connection with the Public Schools in the downtown section. Until a comparatively recent time this city had no pronounced foreign problem. Like other American cities, it had a fairly large proportion of newly-arrived immigrants but the native Philadelphians rapidly assimilated them and turned them into Americans.

Within an incredibly short space of time, foreign colonies have developed in our midst with all that implies. The habits, traits, manners, views, and language have persisted in these colonies to the total exclusion of things American. Children have been born and raised according to the standards of these people, many without standards of any kind whatever. A certain amount of food and water and air provided, the children grow up, just as does any other biological product.

Far-seeing students of Sociology have appreciated the ultimate bad results of such conditions and by persistent howling through the Press and elsewhere have awakened a certain part of the Public to its obligations. The great middle class, however, regard the entire movement with great skepticism and suspicion, and point

with pride to how they managed to grow up and live comfortably without all this newfangled interference. The problem, itself, is hard enough to handle without the additional discouragement of this smug, self-

satisfied complacency.

The reason for this is probably to be found in the employment of the lay social worker. These young women do admirable work. Of this there is no question. But it is possible to obtain much greater service and better results by the employment of salaried trained nurses. The lay worker never has a real satisfactory reason for intruding herself upon the privacy of any home or family, no matter how unfortunate the family may be, and it is certain to be resented, unless the family belongs to the "Dead Beat" class. A slight verbal duel will frequently defeat the purpose of the worker. A trained nurse can always state the nature of her calling, and find an excuse for investigating, and by her previous training is at ease under all conditions.

The City nurses in Philadelphia are instructed to see that the school children receive the medical attention that the school physicians think it desirable that they should have. This is all they have to do! But in the proper performance of this duty, considerable ingenuity must be developed. Willie Blashefsky, for instance, has ringworm in his head and can't see the blackboard, two independent conditions. He must get rid of the ringworm and he must be examined for glasses. Willie must be bodily carted off to a dispensary (a private doctor being out of question) and treated for the ringworm. This requires two or three months during which time, Willie enjoys a modified quarantine. He is allowed to play with the other children at recess and on the street, but must not attempt to go to school and learn anything.

The health boards throughout the country have determined in some occult manner that all contagious diseases are contagious only during school hours and only during the school term, and make rules which result merely in depriving the children of education, as the children have every means and encouragement for acquiring disease Some day special convalesafterwards. cent classes will be provided where children, when able to be about after an illness, may be educated in groups so that the contagious particles, whatever they are, may be kept isolated, and not disseminated as they now The children who have had the diseases deserve some consideration as well as those who have not, and in this way their education will not be suspended.

Willie's ringworms may be treated by the X-ray if the doctor has the time and inclination, but if not he is provided with a salve and instructions to use it two or three times a day. This seems very simple but were it not for the attention of the City's nurse Willie wouldn't get even this. Not so much that the parents openly antagonize the treatment but because of ignorance they

see no necessity of it.

In the case of Willie's eyes, the making of a Secretary of State may be entirely nullified by neglect of this part of the individual. Poor people are illy fed. Poor people's children are likewise illy fed. Willie may have had ulcers on the cornea from poor nutrition before he was of school age; now he has scars on the cornea; the strain of attempting to overcome the refraction of these scars leads to myopia or nearsightedness, and nearsightedness is a distinct ocular disease, and not merely a condition of altered refraction. His life may be restricted to the field of endeavor open to the myope, or, the distress or difficulty with school work may lead him to "chuck" it, so to speak, and we have truancy, juvenile court, etc., etc.

Now in the proper handling of this young man, he must be taken to the hospital or City Hall for a preliminary examination. Then he must have some mydriatic instilled in his eyes to paralyze accommodation and thus render the examination satisfactory. Despite the arguments and protests of the opticians who prescribe glasses, those physicians who see the most of eyes in their several kinds of disorders, are unanimous in the use of "drops" for purposes of examination. Those who do not use them in adults below 45 or in children are largely influenced by the fact that they have no State Medical license to justify them. Were it not for the trained nurse in charge, this part of the procedure would be far from satisfactory. Insufficient mydriasis or cycloplegia requires that Willie return home again and present himself at the hospital twenty-four to forty-eight hours later. Often under such circumstances, becoming tired of going to the hospital, he will return to school and report that the "doctor said he didn't need glasses"!

Even as it is, experience has shown those of us engaged daily in the work that these children frequently need several examinations in order to satisfactorily prescribe for them, and that they constitute the most difficult refraction cases we are called upon to treat. Imagine if you can, how these children could be prevailed upon to report again and again, punctually, without the vis-a-tergo, furnished by the City's nurse.

Centrally located clinics are always overcrowded and the trained nurse engaged in this work will properly arrange for a place for Willie and will have him promptly returned to school and to his parents. The reason of this is, the trained nurse has more resources than any lay worker on account of her training and associations, and furthermore she is a professional worker as a rule, and not a voluntary or paid amateur. The trained nurse so engaged, is making this a life work and not a makeshift until something else turns up.

Many cases of disease in children have merely a technical or academic significance which cannot be appreciated or differentiated from really serious, important conditions by the lay worker, an unfortunate state of affairs which oftentimes causes the entire social service organization to waste valuable time and services, which could be expended much more advantageously in other directions. While the trained nurse is not expected to make differential diagnoses, she is expected to have a fairly accurate understanding of the relative importance of the more common pathological conditions, an understanding which should be sufficient to supplement, not to interfere with, the physician's work at all times.

If now we take another instance, consider the concrete case of Tillie Nefsky, who has enlarged tonsils and adenoids, and is so reported by the examining physicians at the The consensus of opinion among the profession at present is that such structures should be entirely removed and there is no way of giving Tillie the advantage of this except through the aid of the school nurse. In some European communities and also in some intellectually remote American cities, the child is placed upon the table and, without any preparation or anesthesia, the growths are taken out and the child is sent home as soon as he or she feels able to This should be tried upon the operator, or prospective operator, first to determine whether this is the proper way to handle such cases.

The nose and throat clinics in every hospital are crowded and the number of the tonsil and adenoid cases seems to be unlimited. The layworker will take a child

such as Tillie, have her assigned a place in some clinic and allow her to await her turn for examination and subsequent operation. The time for examination will eventually come, but the time for operation may be postponed several times during which interim the lay worker has turned her attention to less odorous and more congenial tasks than sitting in dispensary corridors.

The clinics in the center of the city are always overcrowded and the trained nurse engaged in this work will promptly arrange for a place for Tillie in one of the other hospitals if there be no chance for immediate attention in the first clinic, where perhaps she will be allowed a longer stay in the hospital, and a few more extra good meals. The practice of sending these children immediately after operation to the homes at their disposal, is not to be commended, but frequently there is no alternative. A fatal hemorrhage, more or less, seems to be of no moment to some operators, just so long as they themselves are not the patients.

In the cases of children showing evidences of mental deficiency, degeneracy, cretinism, or similar affections, no one can appreciate the individual condition of the particular child, so well as one with a medical training. In all these cases, the examination for the determination of the deficiency is very trying and extends over a period of several days, and often must be repeated. The trained nurse may be the first to detect the symptoms. Certainly she is the only one who seems to be able to follow up the medical conditions of these children, as well as the social condition.

Children may be stupid in school because they cannot see well, and again they may be stupid because of some mental deficiency. The former may be corrected, the latter only very occasionally is helped. These children must be separated and chances and opportunities given to those most likely to profit thereby.

The nurse is always in a position to appreciate the difficulties under which the child and the family labor, and while not called upon by their employers to do so, nurses frequently supplement the physician's work in countless little ways, that only a skilled worker would understand. A child whose parents are obviously too poor to pay for his or her medicine, can usually be taken care of in devious ways without resorting to the free charities and their delay. This is a greater saving to the child and ultimately to the community than is generally appreciated.

If, for example, the child need glasses and cannot pay, or his parents will not pay for them, he is denied school until he is properly O. K.ed. The city will furnish glasses gratuitously in certain cases, but only when examined by the City's ophthal-This entails a second examination which is unjustifiable. Certain charities, especially the United Hebrews Charities will furnish glasses gratuitously, also, but to their own people. Now a clever nurse, and most of the Philadelphia nurses are that, can readily devise through her acquaintanceship, means whereby that child will be accommodated, and will do so with dispatch, as she appreciates, as no lay worker can, the advantage of eliminating delay in these cases.

The social worker who would go to the family, incident to one of these children and merely deliver the instructions relative to the Doctor's orders, the location of the dispensary, and the hours of the particular clinic, and the names and addresses of the places where the glasses could be obtained reasonably or gratuitously would find the exercise she obtained thereby very beneficial, but experience shows that outside of the pleasure the family received from her call, there would be little or no

result. In the case of the trained nurse similarly employed, the family and the child could be more readily approached and time saved by personally conducting the youngster to the several departments necessary to him. The medicines would be promptly obtained, promptly administered and the child promptly returned to his parents and to the school.

The trained social worker is invaluable in following up these cases, but in the instances such as the school work, where the trained social workers are trained nurses, the results are of still greater value to all concerned. This is especially true in the Central portions of Philadelphia where the corps of school nurses may be taken as the highest index of efficiency in this work.

This, then, resolves itself into a plea for the employment of the trained nurses as social workers instead of the lay workers now employed. There are lots of them to be had. In further support of this, reference may be made to the facts that they require but little extra training, they are always available, and their results are more satisfactory where they have been employed.

No. 1901 Mt. Vernon St., Philadelphia.

"PSEUDO-ATYPICAL CHILDREN FROM A PHYSICIAN'S STANDPOINT."

By J. Hervey Buchanan, Plainfield, N. J.

(Continued from page 89)

I pass from local causes to those of more general type and systemic in character. Perfect health is the expression of a perfect mechanism perfectly fed and perfectly nourished. Napoleon rather inelegantly but very correctly put it, when he said that an army marched upon its belly. This body of ours, composed of countless millions of separate, individual cells, each with a life and the attributes of life, linked into tissues like regiments, and regiments into organs like brigades, and so on through the whole body, a complete army, is aggressive and proceeds only as the commissary department permits. The pseudo-atypical child you will recollect is normal; his muscle is good muscle and his bone good bone. His structure is perfect and his nervous protoplasm is just as perfect as yours and

mine, but in some way the anatomy concerned in our view gives him physiologically a slowly developing mentality or a perverted one, and it does it not only in the ways I have just mentioned, but because very often a perfect mental chain has its action hampered by its commissary supply. I need not go into any extended discussion of physiology. Food is taken into the system, digested, the nutriment absorbed by the blood, taken through the body and offered to all the tissues. These abstract what they need, cast off their refuse, which in turn goes to the kidneys and bowels and with the rest of the food-stuff taken in and not needed, is ejected. Now so long as this metabolic balance is exactly preserved, perfect health and perfect action is rightly to be expected. Action is retarded by deficient supply or quality of food. Or to put it more specifically, just in proportion as you interfere with the metabolism of the parts concerned in the mental processes you derange the normal action. To analyze a bit clearer—if the avenues of mentality in their physical being are wrong in their nutritive balance, you will get defective balance, usually on the wrong side of the ac-This may occur in several ways. The blood may not offer enough proper food to the tissues involved and so lessen their powers. Just as a mixture of alcohol and gasoline will run an automobile, but will not do it efficiently. The blood may offer a food mixed with too much poisonous material that may clog its action. blood may offer too much nourishment of any kind, good or bad; or the body may not remove sufficient of the waste, which in itself may be excessive and so the tissues are choked.

These conditions are very common. You express it pretty nearly right when you sa that a half-starved child can't develop as it should and if you will analyze it a bit farther you will probably find it is due to one of the conditions I have roughly cited, plus another namely that the blood itself may be so poor from acquired insufficiency. that it cannot fulfil the normal functions assigned to it. The discussion of these views is an endless proposition and I shall only attempt a hint to stimulate your thought and shall offer no suggestions. Let us take up the first view a moment, the lack of enough proper food. Every tissue has its peculiar needs and these can be supplied only from a mixed diet. Too large a proportion of school children are sent to school with a breakfast deficient in proper food to keep mentality at par. For example, I have seen many children sent out day after day with a breakfast of coffee, bread and butter and fried salt pork. Now the coffee, probably, if pure, which I doubt, has some milk in it which is all right though too little in quantity, some sugar which is excellent as far as it goes, some extractives which are worthless in food value, some caffeine, which is criminal for a growing child and some water which is filling. bread is all right; but if white the grain in making it is robbed of the main source of phosphates which are sadly needed in brain and nervous growth, and its actual bulk is lessened by the yeast action. I have no fault to find with the butter, but the fried salt pork! Why, my friends, many a sailor has died of scurvy from just such a diet as that, and after all in an illustrative sense. the pseudo-atypical child is often one suffering from a mental scurvy. And yet this is no overdrawn case. I have seen it time and again and so have you, and how can you expect a healthy normal mental growth on such food? Higher mathematics never flourished on salt pork, however appetizing it may be. I will not lay down any rules but how much better would have been a breakfast of some simple fruit, raw or preserved, a glass of milk, a dish of home cooked cereal, dark or whole grain bread with butter, and an egg, a bit of fish or a little fresh meat. There is no comparison and there is but little difference in the cost of either. But follow this faulty breakfast with a midday lunch of carefully selected boiler plate pie, with a patent filler, and then terminate the day with some greasy stew or heavy sodden starch fabrication and do you wonder a child so fed is backward? I don't.

But let us go a step further and consider a condition where the blood offers a food mixed with poisonous material. also a common condition and the poisonous material may be derived from several sources. Not all children have perfect digestions, and food that is in itself nourishing and proper, may through some idiosyncrasy of the child become the source of toxic principles. Thus one child may have a defective starch or fat splitting power, and throw into the blood a wrong chemical compound. Others may not be able to handle proteids and send a stream of products into the blood which are of little value for the nourishment of the organs concerned. And some foods may in themselves be unsuited—as the extreme examples of tomatoes and strawberries which are poisonous to some constitutions. So too a mentality may get a poisoned nourishment from the toxins of various, more or less, chronic diseases. Thus a child having blood loaded with the poisons of malaria, of rheumatism, of tuberculosis, and of what not, is not offering to his bodily tissues anywhere a proper food and his mentality is apt to suffer. I am aware that one often sees very marked exceptions—that a tuberculous child is away and beyond question the brightest in the class; but these are the exceptions that prove the rule and had I time to go a little deeper I could show you that the principle holds and the apparent brilliancy is in fact a fallacy. So too the blood may carry poisonous gases that have a deterrent effect upon certain mentalities.

You may place a child in a properly ventilated schoolroom; the temperature, light, etc., all right. You may break up his periods of prolonged application by five minutes relaxing marches or exercise of some sort and keep him during school hours as nearly to the ideal environment for mental growth as may be, and to that extent he will react in a normal condition for him. him study at home a little, in a hot, ill ventilated room, with the fumes of the kitchen assailing him and perhaps Pa's pipe fragrant with a new charge of Hod Carrier's Delight arising like an infernal incense on the scene! Add to that heavy winter clothes, the underclothing probably at least a week unchanged, if not sewed on for the winter, and all the effort of nature to eliminate checked at every turn and to that extent will normal mentality be impaired. It cannot but be so, and that child will get a good and a bad lot of mental stimuli, and to a certain degree will be pseudo-atypical. It may sound exaggerated, but it is true nevertheless and I have seen it and so will you. And finally in this connection mental rectitude is oftentimes warped out of plumb by neglect of the elimination processes. If good food and good receptive hygiene, if I may so term it, be important, equally so is good elimination. The burning question to-day in all active, progressive municipalities is the question of sewage. In fact, as good an index as you may find to the character of any city is a study of its sewage removal. I think I am safe in saying that if you will show me a city with no sewage system, or with open sewage channels, choked up and fermenting, then I will show you a backward city, its inhabitants below par, and in short its whole civic mentality perverted. And what is true of a city is true of the individual. There are practically no medical ills—I speak in contradistinction to surgical conditions—that do not get their first handling in a thorough cleansing of the intestinal tract and it is a vital matter in the treatment of the vast majority of such cases. Medicine has made vast strides, but the first thought and the most important one to-day, in by far the major number of diseases, is the first thought and practice of years of experience, to unload the bowels, cleanse the sewers lest the body be clogged, not only with its own waste but the toxins of disease. And this is a matter of most studied neglect among mothers of the lower class. Johnnie gets up too late for

anything except to eat a bite and scoot for school and the toilet needs are neglected. And the next day the same and the next and maybe several nexts and then what happens? Johnnie gets a coated tongue, his breath is foul, he has a heavy, dull head and perhaps a headache. His eyes are dull and heavy and perhaps puffed, he is languid and sleepy and his whole skin shows a pasty look that very often is described as bilious. Do you wonder? And this is the error of metabolism, the catabolic phase, which I mean when I speak of nutritive conditions due to defective elimination. Nature in the two phases of metabolism, namely the anabolism or building up ankatabolism or tearing down, must have a balance somewhere reasonably perfect, or she will carry on an organic scheme that is wrong and that works badly; it can't be otherwise. And you can only judge of the existence of these causes by a study of your pupil, a repeated testing of him in various ways and by visiting his home and quietly getting the data of his environment out of school. This will require tact and a good deal of it, but it is the only way to get at the facts, and lay plans for their betterment. Fortunately a broader spread of education is paving the way to remedy the bulk of these conditions. Parents' conferences, such as we hold here in our schools at times, and compulsory visitation to the homes by the teacher such for example as now obtains in New Jersey, where twice each year the teacher must personally visit the home of each pupil; they are opening many opportunities for an amount of good work in the improvement of these conditions. If Johnnie's Ma receives a call from Johnnie's teacher she is either flattered or mad; and if mad she can usually be appeased by the frank open statement that teacher is interested in Iohnnie—and that would be true even if she wanted to wring his neck—that Johnnie seems to have a lot in him and has the making of a good citizen, but somehow, no matter how hard he tries, he does not get ahead as he is capable of doing. teacher wanted to talk it over with Mother And so if she has and get her help. reason to suspect adenoids, or throat or any special sense trouble, teacher asks about his health - has the Doctor ever examined Johnnie and if so what is his opinion. Or is Johnnie eating as he should and what and how does he eat? How are his bodily functions, etc.,

and before it is all over Mother will feel Johnnie has a friend in teacher, and Johnnie will feel more maternal solicitude possibly than he has ever known before, with perhaps great help to him. And this is not a fanciful picture by any means.

But I pass to a final consideration, namely the effect of producing pseudoatypical conditions of bodily states by nerve exhaustion. To be sure the nutritive conditions I have mentioned have some action in this way and so do many morbid processes such as chorea, epilepsy, anemia and the like. I refer more specifically to exhaustion of nervous power by over application and overwork and by the practice of enervating habits. A child has the right to an education. Childhood is the proper time for study and that is his business. I am aware that the intellectual prodigiesthe self-made men, have arisen before day, done two men's work before school, three men's work after and then studied far into the night, according to careful biographers. It is doubtless so, more or less, but the wonder is not that they did it, but that they lived through it. And in spite of these brilliant examples I am constrained to say that as a routine manner of producing intellectual giants, it is to be condemned. It's the old balance of nutrition again—when wear overbalances repair and weakness re-Nerves are funny things and do strange stunts. I know of few things more stubborn than neurasthenic conditions of whatever type. But put a child or young lad to work before school, and again after school, and at work all day Saturday and perhaps Sunday and you are taxing him too much and he weakens. Even machinery needs a rest. I have seen farmers' children driven with hard work, sent to school and to work till each day was a dreary drudgery, and what was the result? Our school systems now demand all that a growing child ought to do and about as much more in my opinion, for I am not much of a lover of high tension education. There must be a relaxation somewhere to let the nervous matter readjust itself.

And what is true of overwork is true of excesses in other directions that are perhaps more vitally exhausting. I refer to bad habits, especially the solitary vice. The day has passed when this phase of school life may be ignored. Much as I dislike discussing the subject, I should fail in my duty did I not point out to you its existence and the large

rôle it plays in the class of children I am considering. The day of frank discussion of sexual physiology is only just beginning to dawn. The step has been taken in some schools to have yearly lectures to the separate sexes in sex reason and responsibili-So far so good, but in too great a class of cases this instruction comes too late and is powerless to stop habits long established. The vicious habit in question is one which is often established in extreme youth, even in babyhood, for I have seen babies of both sexes too young to talk, with their first teeth hardly showing, becoming unconsciously victims of a nerve wrecking habit. And you will find it in your schoolrooms in both sexes. Always suspect it in the child who holds aloof, who hides behind his desk, who flushes without any reason, guiltily when observed; and who is unduly nervous. What is the remedy? I wish I knew. To reprove is simply to intensify the habit. To call attention to it is simply mortification without result, as in many, many cases such a habit is formed without any idea of wrong doing on the child's part. I know of nothing to suggest except to quietly give the offender a prominent front seat and then keep him busy. I believe it is the idler that Satan keeps special watch over.

And with this I draw to a close my hour's talk. I realize its incompleteness and crudity, but if I shall have given you some slight insight into the conditions that make up the class of pseudo-atypical children and forearm you in your educational life, I shall be satisfied. As teachers of the coming generation you have grave responsibilities. In your care will be pupils who in coming years will bear grave responsibilities and who will shape the destiny of the world. But if the proper educating of these future captains of life be important; if there be any truth in the old adage that as a twig is bent so is the tree inclined; if your right teaching be essential to the proper start of the intellect in those pupils of normal type what must it be to those of the pseudo-atypical pupils that will inevitably come under your care. Is it not equally important, nay more so, that a normal brain and an intelligence of great potentiality, but handicapped by some of the factors I have named, shall be freed from its chains and allowed to expand and grow to do its work in the body politic. I think so, and I deem that your own responsibility is not discharged until such handicaps are found and effort made to remove them.

Digitized by Google

DETROIT HOME NURSING ASSOCIATION.

In the organization of the Detroit, Mich., Home Nursing Association a movement has been started which has already attracted considerable attention and which bids fair to serve as an impetus to the organization of like associations in other cities as a means by which to supply proficient nursing to those of limited means.

As a matter of guidance and information for those interested in such a movement, we publish herewith a copy of the booklet lately sent out by the Detroit association:

THE DETROIT HOME NURSING ASSOCIATION.

Personnel—The Detroit Home Nursing Association is a voluntary organization of public spirited citizens—business men, lawyers, tradesmen, physicians, clergymen, teachers, nurses, housewives, social workers. Men and women of all classes are welcome to its membership.

Object—The purpose of this association is to secure prompt, efficient and satisfactory service, in case of sickness, for people of every class, particularly for independent

families of moderate means.

The Need—In every case of sickness in the home—two things are absolutely indispensable—the proper care of the sick and the suitable care of the home. In homes of wealth, the problem is easily solved. homes of poverty, charity often assists. But in the great majority of homes, where incomes are moderate or meager, the need is often acute. If the sick one be the mother of a family of little children, the distress is deepened. Help must be found at once. Where shall it be sought? Where can information regarding the sort of help needed be obtained? Who shall endorse the help secured as efficient and dependable? How serious is the case? Is a skilled graduate nurse most adapted to the need, or will a household servant suffice, or will a partially skilled nurse who is also experienced in housework be best? How long will this help be needed? Inability to find an answer to such questions often brings distress to the family, perplexity to the physician, inconvenience to the nurse, heavy burdens to relatives and grave results to the patient.

The Local Problem Acute—The rapid growth of our city renders the ever-present problem more acute. Thousands of families have flocked to Detroit, leaving friends and relatives far behind. Mothers, sisters, aunts, are no longer at hand to help when The hospitals are oversickness comes.

crowded, the supply of graduate nurses altogether inadequate, the efficiency of nongraduate nurses an unknown quantity, and plain domestic service unavailable at any

A Classified Service—To meet this need, The Detroit Home Nursing Association undertakes to provide four classes of helpers:

1. A "Supervising Nurse," who will, on request, give counsel and advice as to the kind of help needed and the probable time and cost of the same. But no work will be undertaken without the cordial co-operation of the physician in charge.

2. Skilled "Graduate Nurses," who will have personal charge of all important cases

for such time as may be needful.
3. Non-graduate "Household Nurses," who will care for such cases as do not need, or no longer require, the skill of a graduate These household nurses will also nurse.

assist in the care of the home.
4. Household "Helpers," whose sole duty will be to care for the home, leaving the family free to do whatever nursing may be necessary. All nurses and helpers will be assisted by the oversight and counsel of the association's supervising nurse.

Central Bureau—The association will provide an office, centrally located, where physicians and families needing information can apply, at any hour of the day or night, with the assurance that every reasonable effort will be put forth to meet the need.

By Way of Illustration—In response to an application for help in case of very serious illness, a skilled graduate nurse would at once be provided. As soon as her skill could be dispensed with she would be replaced by a household nurse, who could, in turn, give way to a helper when such assistance would meet the need. The expense would thus be reduced to the lowest point consistent with the patient's welfare, while the help would always be that most appropriate to the need.

The Cost of Service—The association is not the competitor of any existing organization, nor is it willing to supplant any agency for the relief of the sick. Its purpose is to assist and supplement other helpful agencies by filling a want long and acutely felt by hundreds of Detroit physicians and nurses and thousands of Detroit homes. It has no authority to either increase or decrease the wages of nurses or of household help of any class. Its sole object is to bring the most available help to the place of greatest need in the briefest possible time. It earns no profits, solicits no business, and is able to dispense no charity.

Its scale of prices for the service of graduate nurses will be the same as that of the local nurses' registries—at present \$25 per week. For non-graduate nurses, the rate will vary, according to the need and the skill required, from \$9 to \$16 per week. Day rates will be slightly higher in proportion. The cost of household helpers will necessarily vary slightly, but will be kept at the lowest figure consistent with efficient service.

For the cost of special service, in operative or maternity cases, application should be made at the office.

As to the Poor?—There being no fund on which to draw for the relief of families unable to pay for nursing or help, a new field of opportunity is opened to churches, lodges, merchants, manufacturers, or friends to provide the amounts necessary for such service for their members, employees or relatives.

Maternity Nursing—In view of the very pressing need and of the risks of mother, child, family and community involved in careless or inefficient nursing in maternity cases, it is the purpose of the association to give special attention to this work. Where the expense of a graduate nurse cannot well be borne by the family a household nurse, under graduate supervision, will be provided. If desired the supervising nurse will visit the patient previous to the birth to confer with her as to general health, plans and precautions. She will maintain a general oversight of patient and of household nurse, and will visit the patient after

the birth, giving any needed counsel as to feeding and care of the child. The extra cost of this prenatal and postnatal supervision, and of assistance at confinement, will be nominal. In each case the office should be consulted.

Association Membership—In order that the association may extend its benefits as soon as possible, and that its work may be made most efficient, it earnestly solicits the membership and the favor of all public-spirited citizens, both men and women. The cost of its maintenance must at first be provided out of the benefactions of such friends. The association has no capital, issues no stock, declares no dividends, receives no profits and pays no salaries to its officers. Neither is it a "charity." It is a bureau of public service. In time it may become self-supporting. Meanwhile the initial expense must be met.

Three classes of contributing members are provided for, (1) Sustaining Members, who contribute \$10 or more to the work of the association. (2) Corporate Members—organizations or corporations paying an annual fee of \$5, and (3) Active Members, who pay an annual fee of \$2. Organizations contributing annually \$100 or more are entitled to representation on the Board of Trustees.

Among those known in the American hospital world who are connected with this movement are Dr. W. L. Babcock, The Grace Hospital; Dr. J. N. E. Brown, Detroit General Hospital; Dr. Wayne Smith, Harper Hospital, and Miss C. A. Aikens. The superintendent is Agnes D. Carson, R. N., a woman of experience in such work. The success of the Detroit association will be watched with interest.—The International Hospital Record.

CORRESPONDENCE.

In communicating with THE GAZETTE always send your name and address. They will not be printed without your consent. We have but one place for anonymous communications, viz., the waste basket.

WE ARE ASKED TO EXPLAIN.

Dear Sir:

Presupposing that you will be glad to enlighten the readers of your magazine—"The Dietetic & Hygienic Gazette," I am writing to ask for an explanation of the article by Dr. Kenerson, of Buffalo, which appeared in the January issue, for it is somewhat sur-

prising to see it published in a reputable periodical.

Some condemn the magazine for printing such matter; but I justify your action as doing a great service to the nursing profession (for it is a profession and not a trade except where those engaged in it lack the higher ideal and vision); for the bitterest enemy of low-grade training for nurses could never have painted such a graphic and vivid picture of the miserable excuse for professional instruction; the low type of women who would stand for such an excuse; nor the utter lack of intelligence, manliness and refinement in a so-called Doctor giving such

instruction, as is delineated in every para-

graph of this article.

He is a clear exponent of the absolutely selfish person—utilizing the services of others for his own ends, and giving them a delusion in return. No wonder he is opposed to the "Seely Bill," which aims to protect the public against just such people, who send out "nurses" to demand the same fee after his training, as recognized graduates from the best training schools, demand.

While every registered nurse is not perfect,

of course, being human, do you think it excuses us for lowering our ideals?

I shall truly appreciate your telling me why this article was published: in good faith, or as a joke, or (as I believe), as an exposition of the audacity and low ideals of such men as the author?

Very respectfully, R. N.

The article to which our subscriber refers appeared in the January GAZETTE under the title "A Plea for More Nurses at a Smaller It has attracted considerable attention, and was reprinted in full by The International Hospital Record soon after we published it. It does not seem to us to require any "explanation," for Dr. Kenerson furnishes his own explanation and has made himself very clear.

It is, however, quite proper that our correspondent should know our motives in printing the article. The Editor of this Department attended the meeting of the Medical Union, one of the oldest and largest medical clubs of Buffalo, at which Dr. Kenerson read this paper. The discussion following the reading of the paper brought. out many expressions of approval from leading physicians, and all were unanimous in the opinion that our city needs "more nurses at a smaller wage" and that the Doctor is taking the right course in helping to supply this need. While the speakers deplored the existence of a class of ignorant and totally untrained "practical" nurses, there were some who considered the registered nurse an impossibility in many deserving cases. In short, the discussion amounted to a general confirmation of the

premises in Dr. Kenerson's argument, and an endorsement of his painstaking work in training nurses to supply a real and growing demand in our city. The Editor was impressed by the frankness and earnestness of this meeting and felt moved to report the discussions for the benefit of our readers, but finally decided that it would be better to print the paper and let the readers do their own discussing. Having known Dr. Kenerson for more than fifteen years as a prominent and successful surgeon-and not having discovered the personal traits which our ascribes to him-we felt very fortunate in securing his paper for publication. Since it appeared in print, a dozen or more physicians have corroborated Dr. Kenerson's statements and commended him for criticising the arrogant attitude of some trained nurses.

Of course it is generally understood in journalism that the editor is not responsible for the views of the various authors who contribute to his pages. This is true of this Department, although we have never made the idea prominent because it looks too much like an apology, and we are not apologizing. We always know what we are printing and we take the responsibility of selecting it long before it goes into type.

The GAZETTE is fortunate in that it is not the mouthpiece of any organization, and does not have to submit its "copy" to any group of censors before going to press. Readers of this Department will occasionally have an opportunity to peruse articles which the official "organs" could not very well accept for publication. That is one reason why so many nurses are reading The GAZETTE.

We maintain that all men and women should do their own thinking, and we like to give them things to think about. One never becomes conversant with the world by looking at everything from a single point of view. There are other views.

TIT FOR TAT.

"A United States Senator," said a young physician, "addressed the class I was graduated from on our commencement day. He advised us in his address to be broad and generous in our views. He said he once saw two famous physicians introduced at a reception. They were deservedly famous, but they were of opposing schools, and the

regular, as he shook the other by the hand, said softly:

"'I am glad to meet you as a gentleman, sir, though I can't admit that you are a physician.

"'And I,' said the homeopathist, smiling faintly, 'am glad to meet you as a physician, though I can't admit you are a gentleman."—Exchange.

Onestions and Answers.

The following answers are not "official." They are prepared for the editor.

University of the State of New York 20th Nurses Examination.

GENITO-URINARY NURSING

FOR MALE NURSES

Wednesday, June 25, 1913—9.15 a. m. to 12.15 p. m., only

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. What is the first manifestation of syphilis?

Ans. The primary sore, or chancre.

2. How would you give a mercurial

vapor bath?

Ans. The patient sits on a chair and is covered with a sheet or a cabinet as for an ordinary vapor-bath. Under the chair is a vaporizing apparatus consisting of a lamp over which is arranged a basin containing calomel to be vaporized. Usually the calomel is placed in a cup surrounded by water and the vapor is mixed with steam. After about 15 minutes the heat is discontinued and the patient sits for ten minutes longer in the vapor; he is then wrapped in blankets and put to bed where he remains an hour or more before being dried.

3. What is strangury?

Ans. Painful and extremely slow urination.

4. Define bubo.

Ans. Inflammatory swelling of lymph nodes, generally in the groin.

nodes, generally in the groin.

5. What care would you give a patient

after circumcision?

Ans. Keep patient quiet. Place loose dressing on wound and keep moistened with antiseptic solution. Once a day, or oftener if necessary, irrigate the wound thoroughly and put on fresh dressing.

6. Define genito-urinary.

Ans. Pertaining to the generative and urinary organs.

7. What is inflammation of the bladder called?

Ans. Cystitis.

8. What is loss of power to control the voiding of urine called?

Ans. Incontinence of urine.

9. What important point should the nurse remember when caring for a patient who wears a truss for the support of a hernia but who is not confined to the bed?

Ans. If the patient does not wear his truss in bed, it should be put on and perfectly adjusted before rising from the re-

cumbent position, and it should not be removed until patient is in bed and lying down.

10. Locate the perineum.

Ans. The space between the anus and genital organs, bounded by the rami of the pubes and ischia and a line extending between the tuberosities of the ischia.

11. What preparation would you make

for an operation on the bladder?

Ans. For a day or two preceding operation the bladder should be well flushed by the use of appropriate diuretics. If conditions make it necessary, the bladder may be irrigated with antiseptic solution at intervals of six or eight hours in order to counteract septic conditions. Twelve hours or so before operation the genitalia should be thoroughly cleansed with soap and water followed by antiseptics; the skin should be shaven, including the lower part of the abdomen and the upper parts of the thighs, and should then receive the antiseptic treatment preferred by the surgeon; the bowels, also, should be well emptied.

12. If a hemorrhoidal hemorrhage occurs what should the nurse do till the ar-

rival of the doctor?

Ans. Use cold water freely; apply lotion of alum water or some other convenient astringent; dust thoroughly with alum powder, tannic acid or other astringent. Apply dry compress as firmly as possible to bleeding points and raise patient's buttocks as high as possible from level of the bed.

13. What is the incubation period of gonorrhea?

Ans. From two to six days.

14. Define chancroid.

Ans. A soft, non-syphilitic, venereal sore, resembling a chancre.

15. By what symptoms is gonorrhea characterized?

Ans. First, irritation and moisture of meatus urinarius, with smarting sensation on urinating. Within 24 hours pus begins to discharge from urethra and urination is very painful. Urination becomes frequent. Chordee usually occurs. There is generally some fever and malaise.

DIETETICS

Thursday, June 26, 1913—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. Define (a) chyme, (b) chyle.

Ans. (a) Stomach contents after digestion. (b) Milky fluid absorbed from small intestine into lacteals after digestion.

2. At what age may a healthy child begin to digest starches?

Ans. Three or four weeks.

3. In what organs and by what enzymes are starches digested?

Ans. In mouth and stomach by ptyalin.

In small intestine by amylopsin.

4. Mention three results gained by the cooking of food.

Ans. Sterilization, softening (usually),

improvement in palatability.

5. Give the freezing and the boiling point of (a) the Fahrenheit thermometer, (b) the centigrade thermometer.

Ans. (a) $+32^{\circ}$ and $+212^{\circ}$. (b) 0°

and $+100^{\circ}$.

6. Make a list of five tissue-building foods.

Ans. Lean meat, eggs, cheese, fish, legumes.

7. What does the term "top milk" mean?

Ans. Milk in the top of the bottle, which contains a larger proportion of fat than the "whole milk" before any separation has taken place. The term "top milk" may be applied to the top 7 ounces, or 9 ounces, or 16 ounces, etc., of a quart bottle of milk,—according to the proportion of fat desired in the milk.

8. When 10 per cent. top milk is used, what is the relative proportion of fat to

proteid?

Ans. Two and one-half times as much. 9. Outline the daily care of an ice box.

Ans. Remove all articles that are not "keeping" well, and eliminate odors as far as possible. Cleanse box with clear or slightly alkaline water. Use scalding water as often as needful to keep box sweet. Put nothing into the box that is not clean in the first place. Do not allow box to drain directly into sewer connections. Keep it liberally supplied with ice. All materials with strong odors should be tightly covered while in the ice box to prevent tainting of other foods.

10. Contrast the cooking of meat in making broth and in broiling.

Ans. In making broth the meat is macerated and all the juices diluted and extracted as completely as possible. In broiling the surface of the meat is coagulated as rapidly as possible, thus retaining the juices during the further process of cooking.

11. Describe the care of milk in the home. Give reasons for your answer.

Ans. Bottles of milk should be wiped or washed as soon as received from the wagon and placed directly in the refrigerator. They should not be opened until the milk is to be used, and any milk remaining should be tightly covered and returned to refrigerator. Refrigerator should not be allowed to become warm. Milk should at all times be covered to protect from dust and insects. It should not be kept in same compartment with strong smelling foods like onions, cheese or other stuff from which it might absorb unpleasant odors. The object of these precautions is to keep milk clean and to retard the growth of bacteria.

12. How would you make junket? State the source of rennet.

Ans. Heat ½ pint of fresh milk to 100° F., and sweeten if desired. And 1 teaspoonful pepsin or rennet, pour into cups or shallow dish, and let stand till firm and cool. If flavor is desired it must be added before cooling. Rennet is prepared from the calf's stomach.

13. Give the general rule for making

cream vegetable soups.

Ans. Cook vegetable thoroughly, reduce to a pulp and strain out all coarse particles incorporate with milk or cream and milk, blending into a creamy liquid. Butter, stock, and flavors may be added as desired.

14. Tell how you would make cocoa and give your reasons for thus making it.

Ans. To 1 teaspoonful cocoa add 1½ teaspoonfuls sugar, mix and add enough hot water to make smooth paste. Stir into 1-3 cup boiling water and boil 2 minutes. Add ½ cup hot milk and bring just to boiling point. Serve with cream if desired. Cocoa must be rubbed to smooth paste to prevent lumping. It must be boiled briskly and not too long to preserve its aroma. Hot water and hot milk must be ready to add

Continued on Page XX.

THE DIETETICAND HYGIENIC



PUBLICATION OFFICES

87 Nassau St.

New York

\$1.00 Per Annum. 15c. Per Copy.

Entered as Second-Class Matter at the New York Post Office.

Digitized by GOOGLE

The best antiseptic for purposes of personal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teeth.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY LOCUST AND TWENTY-FIRST STREETS :: ST. LOUIS. MO.

AC A

VAGINAL DOUCHE CHINOSOL

(Accepted by the Council on Pharm, and Chem., A. M. A.)

MORE THAN SUPPLANTS BICHLORIDE BECAUSE

CHINOSOL

IS A MORE POWERFUL ANTISEPTIC

IS POSITIVELY NON TOXIC

IS ABSOLUTELY NON IRRITATING DOES NO DAMAGE TO MEMBRANES

If mistaken for a "headache tablet", no tragedy can result.

CHINOSOL CO.
PARMELE PHARMACAL CO.
54 South St., N.Y.

Digitized by Google

THE

DETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A.M., M.D.

Vol. XXX. .

APRIL, 1914.

No. IV

EDITORIALS.

SCIENTIFIC EFFICIENCY.

A really scientific efficiency will produce the best possible results all around, advantaging not only one factor in the economic scheme, but mutually every one and all. Any other kind of efficiency is spurious and not scientific; and will be found in the long run not to pay anybody concerned—employer, employee or middleman-nearly so well as scientific efficiency. The capabilities of any inanimate, inorganic machinery, such as is made of wood, metal, leather and so on, with the amount of finished product that can be got out of it in any given number of hours, can be mathematically gauged; the expense of running a plant, the cost of the raw material, the freightage and the like—such factors are easily estimated.

It is not so easy to gauge the capabilities of the organic, the man-machine which is the fundamental factor in the world's work; and yet any plan to secure mercantile efficiency that would claim to be scientific has got to take into serious and sympathetic account the nature and the capabilities of the sentient, the human machine.

It is a spurious and not a real efficiency which would tend to strain and overspeed and exhaust unduly the workman, either he who works the more with his brains or he who works mostly with his muscles. The fagged brain or muscle doesn't pay, because it is unreliable; and this in turn means wanton extravagance. It is economic waste to goad a tired mind or body beyond the normal limits.

The true scientific management will stop labor before fatigue reaches the stage of unreliability. And one must consider here, not only daily but also weekly exhaustion.

A wholesome fatigue, which good food well enjoyed, and a good night's rest, will recuperate, is the natural (and the blessed) state of man; but exhaustion beyond the powers of recreation—which is re-creation (making over again) is unnatural and therefore economic folly. It is uneconomic, if nothing else, to have exhaustion increase progressively day by day and week by week, until the human machine must go before its time to the scrap heap; this is uneconomic for the employer, because the longer any man is on a job the more experienced he becomes; and an employee's experience is a business asset, well worth paying for.

Fatigue of the human machine is the cry of the builders for more material, when the supply has been depleted by successive effort. Every muscular movement is a chemical process manifested by heat, motion and perspiration. All combustion, whether vital or inorganic, is a chemical combination of atmospheric oxygen with the elements (food or coal) taken in the machine; in the one instance the body's discharges, in the other, ashes and clinkers are the residue of the burning. Forced draft will the sooner and the more wastefully consume the fuel and wear out the machine, no matter of what kind

Laboratory experiments have shown the essential nature of this chemical process in the human machine, and its relation to fatigue. A muscle being stimulated, there is release of energy, part of which contracts the muscle, whilst the rest as heat, maintains the bodily temperature or is wasted in perspiration. Fatigue is due mainly to the waste products resulting from this chemical

reaction. Inject the extract of a fatigued muscle into an animal and it will show great prostration; but inject an extract of a non-fatigued muscle, and no languor at all is apparent. A fatigued muscle is one which, by reason of repeated contractions, has undergone much chemical change, with accumulated waste; and the waste, instead of being discharged, gets distributed through the blood all over the body. Thus soldiers, after an exhausting march, are just as arm tired as they are leg weary.

The role which accidents play comes in here: The best surety against industrial accidents is an alert mind and a virile body; on the other hand the ideal predisposition to accident is an exhausted, run-down, devitalized human machine. In Europe they have scientifically worked out the relation between fatigue and accidents; with the result that the latter have been reduced at least fifty per cent.

Bank clerks make most of their mistakes in the late afternoon; this is one of the reasons why banks close early—the bankers have found their employees' mistakes too expensive. And every one knows what dreadful calamity results when railway men work continuously too many hours. A wise corporation, however selfish, will make its hours of labor of reasonable number; and indeed, it is most gratifying to observe that the essential parallelism of efficiency and humanity is being more and more appreciated throughout civilization.

Doctors, by the way, are oftentimes overworked; when this is so, the patient had best be content with the services of an assistant (or a confederate, as has been said); men who have in their keeping the health of human beings (the most precious thing in existence) must be assured rested minds in healthy bodies. The same consideration should be had for druggists; to err (with perhaps fatal results) in filling a prescription is indeed human; and hardly blameworthy in a man who must be at his desk more than half the twenty-four hours.

"LET THERE BE LIGHT."

"LET there be light;" also, let the light be placed so that it shall not glare, and be properly disposed in relation to shadows.

In the splendid campaign now on for the alleviation of occupational diseases and accidents the part taken by Mr. Leon Baster, founder and secretary of the Engineering Society of England and Editor of *The Illuminating Engineer*, is most worthy of appreciation.

Mr. Gaster insists first that light (whether natural or artificial) shall be sufficient for the work to be done. In Holland a minimum of illumination has been fixed for general work; and in trades especially trying to the eyes, such as jewelry, engraving, embroidering and the like, a minimum has been established. The British Government is requiring photometric measurements to be carried out in many factories, to the same end.

Sufficient light being forthcoming, the next problem is how to use it wisely. Factory lamps are oftentimes not sufficiently shaded; and are placed so that they dazzle the eye and strain the vision. A man habitually using his eyes in strong light decomposes his "visual purple" faster than it can be regenerated. Besides, a constant, extreme fatiguing and painful muscular contraction is compelled. So the most lighted room is not always the best lighted. Very few modern illuminants are of sufficiently mild intensity to permit their use at close range. The old soft, mellow yellow candle or gas light, when there was sufficient of it, treated the human vision much more mercifully and benignantly. Powerful lamps must be screened by such well-designed reflectors as will both remove the glare, and direct the light, not upon the workman's eyes, but upon the object.

And lamps must be properly placed as to shadows. Not to one's right hand, for example, where it will shadow the sheet one wished to write upon, or the material the driller or cutter wishes to work upon. Here is a common defect in banks and offices;

and many an operative's hand and fingers have been mutilated by reason of the light casting a shadow of the head or body at work. In many shops the light falls on the floor (where it is wasted), rather than upon the tables, where the work is to be done. Dangerous machinery should ever be well-lighted; it is worse than useless to place a guard about such machinery, if working it in semi-darkness invites maining or even death.

Bad lighting headed the list of causes leading to accidents in a report of a metropolitan casualty company, in which it was shown that when darkness set in early and artificial light had to be depended upon, the accident percentage rose progressively and became greatest in the darkest months. Throughout the year a relatively large proportion of accidents occur after four P. M. -the time when artificial light begins to be necessary. (No doubt the late afternoon fatigue is an additional factor in such accident-production.) A badly-lighted shop, moreover, will become dirty and unwholesome.

And passages are oftentimes badly lighted so that workers stumble over obstacles; when one is carrying molten lead, for example, the matter becomes no trifle. Pretty nearly as bad is it to place a bright light in front of some obstacle; so that the latter shall be in shadow, whilst the light glares into the eyes of anyone approaching. A man walked off a platform and was killed, because his eyes were dazzled by a light set to prevent just such an accident.

The normally functioning eye, like any other organ that is properly used, tends to

increase in power and facility with right usage; if overstrained or ill-used it becomes progressively less and less able to do any work at all. This precious organ is really an expanded portion of the brain; more than that, the eye affects the working of other organs and is in turn affected by them. Insufficient eyesight is the cause of most chronic headaches, of some indigestions, and of many conditions of depression or fatigue. These are of course individual misfortunes; but the employer of labor is singularly blind to his own interests to imagine they do not affect him. Apart from humane considerations (which, despite pessimists, obtain generally in business), improper lighting is an economic loss for employers. In shops having insufficient or glarey lighting not so rapid work can be done, besides which the worker must perforce turn out an inferior grade of article.

The proper lighting of schools is of course vastly important. Education now being compulsory, parents have a right to demand that the children whom they send to school shall have their tender eyes safeguarded while studying. Besides, children contract incipient spinal curvature and other afflictions by having to twist themselves so that the light may fall properly upon their desks or the blackboard. Lighting in the home is also frequently faulty, the eyes being blinded, whilst the page is not illuminated as it should be.

America is the pioneer in illuminating engineering; yet even we it seems, have much to learn, and more still to put in practice, when it comes to the right kinds of artificial lighting.

Dr. Harvey W. Wiley recently declared in an address that we have, in America, the most abundant and palatable food in the world, and yet spoil more of it in the kitchen than any or all other countries. Good food and good cooking are preventives of divorce. Who ever heard of divorce in rural France, where the women know how to cook? You

can no more drive a man away from a good table than you can a cat; and if you do he will come back—the same as the cat. The way to keep husbands at home is to feed them well. Old age is the only disease a respectable person should ever die of. If we would go back to the simple life—and good cooking—we could all live much longer than we're going to.

THE GERM OF INFANTILE PARALYSIS.

Another beneficent discovery is added to the brilliant series issuing from the Rockefeller Institute for Medical Research, wherein Flexner, Meltzer, Carrel, Noguchi, and others have solved and are solving problems that have baffled medical science since, and before, Hippocrates. Flexner and Noguchi have now demonstrated the germ of infantile paralysis (epidemic poliomyelitis). This disease has long been suspected, nay it has been proved to be, infectious; but the revelation of the germ essential to its development has until now been wanting.

A child convalescent from some previous ailment and thus susceptible to any infection-indeed, a child seemingly in perfect health at bed-time, may awaken the following morning with symptoms of illness, conspicuous among them being paralysis of groups of muscles or of an entire extremity, which becomes flaccid and unresponsive to the ordinary reflexes. The origin of this phenomenon lies in the gray matter (poliomyel) of the spinal cord, where are the nerve centres dominating the body's muscular action. These centres, on account of the unusually direct arterial supply to them, are peculiarly exposed to the action of germs circulating in the blood.

A great deal of experimentation has been done by Flexner and other workers to find this germ; their efforts were thus far frustrated by the unusual smallness of the offending parasite. However, a year ago, in cultures made from the nerve tissue of children that had died of infantile paralysis and from such tissues of inoculated monkeys (those biologic brothers of men) the specific

Another beneficent discovery is added to virus was isolated; and the proof of this isolated are brilliant series issuing from the Rockeller Institute for Medical Research, where-Flexner, Meltzer, Carrel, Noguchi, and veloped the characteristic paralysis.

But now, by methods most patiently perfected, the germ itself has been identified, isolated, photographed, artificially grown in pure culture, reproduced in successive generations, and implanted in monkeys which have manifested the usual symptoms. All disease-engendering germs are invisible to the unaided eye. (How thousand-fold more destructive to humankind have been such agencies than its tangible enemies); but the germ of infantile paralysis is infinitesimally microscopic and is globular in form, hanging together in short chains, pairs and small masses, devoid of independent motility.

Thus, having now found the germ, we may well hope (since laboratory experiments have a way of being superbly reduplicated) that an immunizing and probably also a curative agent against infantile paralysis will be evolved. Furthermore the study of the various modes of contracting the disease will be facilitated, and the difficulty of detecting it will be obviated, because every doubt will be removed by the demonstration of the presence of the specific germ. Thus has medicine established another great triumph: Tender children will not so frequently die of epidemic poliomyelitis; and such little sufferers as survive will not continue through life with limbs shrivelled and powerless for their office. Here again will be reason for mutual gratulation by all humankind-except the anti-vivisectionists, who will, of course, remain disgruntled.

THERE is a maxim ascribed to Theognis, according to which "Surfeit has killed many more men than famine," and Hippocrates had an aphorism that "Everything in excess is inimical to Nature." The former maxim finds modern equivalents in "Surfeit slays mae than the sword" (a Scottish proverb from Ray's collection), and a Latin counterpart in "Non plures gladio quam cecidere gula." Two other Latin proverbs put the same idea in different words: "Multo

plures satietas quam fames perdidit viros" and "Multos morbos multa fercula fecerunt." A laconic adage says, "Much meat, many maladies;" an outspoken one says, "Quick to the feast, quick to the grave;" and a farseeing one announces that "Feastings are physicians' harvests." The Spanish rhyme "Mas mato la cena che curo Avicena" (The supper has killed more than Avicena cured) is a popular maxim.—British Medical Journal.

FEWER LYNCHINGS OF NEGROES.

Dr. Booker T. Washington states that at the end of ten months (Nov. 1 last) there had been 45 people of his race put to death by mobs, a reduction of 4 as compared with the same period in 1912. 45 lynchings only 7 or 1.5 per cent. of the victims were charged (justly or otherwise) with rape. In other of the 45 lynchings, such crimes as the following were imputed: being lawless and assisting a criminal to escape; a half-witted negro for frightening women and children: murder which a few days later another negro confessed having committed: for striking an Italian merchant who had swept dirt on the lynched man's shoes. Two colored farmers were lynched, no motive being assigned: one newspaper declared regarding them that "two apparently inoffensive negroes, good farm hands, real wealth producers, were assassinated; another newspaper stated "as far as anyone knows they were quiet, orderly country people." There are now much fewer lynchings than formerly in our South land. Christianity's twentieth century began with its almost daily record of negroes hanged, burned or shot to death; many of these killings were accompanied by dreadful atrocities. Nor were by any means all of these crimes committed in the South. To comprehend lynching aright one must consider crowd and race psychology. Human civilization is evolved from savagery. Slowly and painfully has our race risen to its present lofty plane, slowly have the highest known brain centres, those concerned with intellect, reason, judgment and the like, those gained through the triumph of the wille zum guten over the wille zum leben. have developed in us. The savage lacks these loftier attributes: his conduct is dominated by lower and more basic centres: it is unreasoning, passionate, impulsive, imitative and instructive; uncontrolled emotion

characterizes it. It has indeed taken eons for humankind to have attained civilization; it is one of the ghastliest of phenomena—how almost instantaneously humankind can relapse into complete savagery; how easily, under the dreadful hypnosis of the crowd, the cerebral centres are short circuited and the headless spinal cord holds sway. Thus came about St. Bartholomew's, the Sicilian Vespers and many another blot on civilizations 'scutcheon; to such as these lynching is akin, a savagery all the more likely to occur by reason of race-antagonism, also a fundamental primeval instinct, unworthy of civilization.

In justice to the "criminal" negro one must reflect that some negroes have, within several years past, committed atrocities inexplicable on any natural or reasonable basis. Especially has this been so in mining, lumber, railway or like camps and in cities rather than in rural districts-in places where large industrial operations have been in progress. Nor have the atrocities here referred to been against the sanctity of womanhood; infants and venerable women have been attacked, with most insensate frenzy and with astounding indifference to the sufferings of either their victims or of the "guilty" negroes themselves. Surely the explanation here must lie in the admission made by an official of one of the largest drug houses south of New York that his firm shipped quantities of cocaine to "The orders many parts of the South. come from contractors and operators of the most extensive kind, and the latter say that they could not keep their working forces together for so much as a week, if the men were not able to procure cocaine."

Frenzy endangering cocaine, alcohol, syphilis, tuberculosis, lynch-law; how grateful should the negro be for these blessings of civilization—blessings unknown to him before his acquaintance with that benevolent brother who has been so willing, so eager indeed, to assume the White Man's Burden.

[&]quot;As one who seeketh to fold a newspaper in a high wind, so is he who argueth with an angry woman."

It is stated that the monocle in use is the mischievous consequences of the irritation caused by this useless glass.

ANNOUNCEMENT.

The publication of the proceedings of the second annual meeting of the AMERICAN ASSOCIATION FOR PROMOTING HYGIENE AND PUBLIC BATHS which

was begun in our number of December last, is completed in this issue. Our May number will be devoted to Domestic Hygiene and Rural Sanitation.

MILK.

MILK is particularly prone to deteriorate and to develop multiplication beyond any possibility of counting bacteria, in hot weather. One of the most potent factors making for bad milk is its becoming warmed somewhere in transit from the cow to the consumer's lips-in the sun on a hot back porch or stoop, for example. Milk bottles should be kept closed, both in and out of the ice box, and this food should be pasteurized if there is the slightest doubt as to the excellence of the local milk supply. Indeed. in summer it were best to have all milk (certainly that intended for infants and children) thus prepared. In great cities health departments and such beneficent agencies as the Nathan Straus stations are working effectively for pure milk. Many dairy

farms are distributing milk advertised as pasteurized; but where adequate guarantee of the efficiency of this process is lacking the Straus Home Pasteurizer should be used by mothers. This is an uncomplicated apparatus which can be obtained, with exhaustive yet simple directions, in any size, for \$1.50. Indeed, any tinsmith can easily make one by following the directions for manufacturing freely given in any Straus Laboratory in New York City. Besides, during epidemics, where all milk in nurseries and hospitals must immediately be pasteurized, this apparatus is an excellent makeshift until a larger plant can be installed; the whole process takes about forty minutes, so that the whole daily supply of milk for dozens of babies can be pasteurized with one fixture.

OVERCROWDED STREET-CARS.

A narrow car; seats filled with persons attempting to read newspapers while the car swings and jolts along its way; aisles jammed with men and women, boys and girls and tiny children, swaying and rubbing, one against the other, coughing and sneezing, pushing and pressing—what a sight for a progressive age; what a sermon for the moralist; what a despair for the student of public health and hygiene! Endless problems are presented by this picture, seen daily in nearly every American city. Most important is the menace to health from the thousands of bacteria, hidden in the throats of diseased men and women, and sprayed directly into a stagnant air, moist and unmoving in the absence of sufficient means of ventilation. Virulent organisms are inhaled into the throats and lungs of tired workers and tiny babes, who form an excellent host for their quick cultivation. The fare for the ride is small, but the cost cannot be estimated in terms of dollars and cents.—The *Jour. A. M. A.*

METABOLISM AND DIETETICS.

THE whole subject of metabolism and its relation to dietetics reminds one somewhat of working out a picture puzzle, where not only one picture has been cut up into intricate shapes, but where numerous pictures have been cut up and confused. One worker fits in his little bit, and another his, and a third likewise, and so on, and then some one else discovers that two different pictures are being confused; and so the work goes on until every now and then the master mind comes along and groups the discovered bits aright.—Friedenwald and Ruhräh, "Diet."

ORIGINAL ARTICLES.

THE PROCEEDINGS OF THE SECOND ANNUAL MEETING OF AMERICAN ASSOCIATION FOR PROMOTING HYGIENE AND PUBLIC BATHS IN BALTIMORE, MD.

HYGIENE OF THE FARM-HOUSE AND FARM.

By J. A. Nydegger, M.D., Delegate from United States Public Health Service.

Sanitary laws in great numbers have been enacted and enforced for the betterment of the complex health conditions of our cities. Extensive public health educational campaigns have been carried on in all that pertains to health and hygiene; and in the onward movement which at the present time is being agitated more than in any former period, in behalf of better methods of living, physically, mentally and morally, with the great advances made in hygienics, eugenics and euthenics, the rural and urban districts, which now offer the most fruitful fields for the promotion of hygiene, in all the term implies, seem in a great measure to have been overlooked and practically passed by, with but a few exceptions, and up to the present time, almost forgotten. This has been due in a measure to the engrossing attention paid to improving health conditions in the cities and larger towns, while the country areas have been sadly neglected.

Other factors of importance in this connection are the remoteness of some of the sections from the more populous centers and environs, and partly through lack of knowledge and ignorance of the existing injurious environment, in so far that the rules for correct living and good health have been almost completely ignored.

In further explanation of the backwardness in the rural health movement, it might be said that the non-investigation into the true status of health conditions in rural communities more thoroughly, has not been intentional on the part of the sanitary and health officials of any State, but partly follows as a result of the lack of interest and knowledge of the inhabitants themselves of the said areas.

If we but stop to consider for a moment, the facts are plainly brought home to us, and more especially to those of us who are somewhat familiar with rural life and rural conditions—that the main source, the fountain heads, so to speak, of a number of diseases, have their origin chiefly in the country, and are there maintained by reason of the more favorable environment, that is, in being more unhygienic and more insanitary, for the propagation and spread.

If we take the average farm-house of people in moderate circumstances, located some distance from a city, we are liable in the vast majority of instances, at least, to find that running water is not supplied in the building, that the all cleansing and health-giving bath tub is wanting, that the water-closet is not placed in the house, but has the highly dangerous substitute in the way of a privy or outhouse, badly constructed, and frequently in still worse state of repair, unscreened and unprotected, located at some point in the yard, or elsewhere when no enclosure is thrown about the house. As we know, a privy or outhouse is designed primarily to prevent soil pollution, and hence to prevent the spread of disease through dissemination, nearly always is an inferior substitute.

At a result of the neglect of attention to these simple but important, and now well known precautions, flies and other insects after having access to the unprotected outhouse and excreta, readily gain access to the dwelling through the unscreened doors and windows, and convey, the pathogenic organisms of disease on their legs and bodies to the food and drink of the occupants. It is now a well established fact that typhoid fever, to which there is annually sacrificed in the United States alone the appalling number of 35,000 to 40,000 lives, can be obviated to a very great extent by the observation of well known and comparatively simple precautions. Typhoid fever is distinctly a disease of the country, that is, its prevalence is greater in the country than in the city; and it has been conclusively shown that the propagation of typhoid fever in the United States is from the country to the town; and based on a most modern estimate, nearly one-half million of people are attacked annually with this disease in this country.

By inadequate, or more frequently, by the absence of screens on doors and windows, malarial infected mosquitoes gain access to dwellings (I now refer more particularly to our Southern States) and infect the occupants with malaria, or vice versa, having fed on those suffering with the disease within, fly forth after having sated their hunger subsequently to bite and infect those who may be unprotected in the vicinity, whether within doors or without, thus resulting in much illness and suffering. loss of valuable time from work, so necessary as a means of livelihood, both for themselves and those dependent on them; a very grave condition of affairs indeed, as compared to the comparatively trivial outlay for providing important means of protection.

In such a farm-house as I have described, the source of the drinking water is usually a shallow well, or a spring, located frequently near the dwelling and also very often near the privy.

Colonel Waring, one of the most noted sanitary engineers this country ever had, has rightly said that a pure water supply is the most important factor in the reduction of death in a community, and the next most important factor after that is the proper disposal of sewage.

With insanitary and unhygienic conditions existing about the farm-house, in the manner as above stated, the result is that the soluble excrementatious matter from human beings and animals, sewage, waste water and slops from the dwellings, whether deposited on the surface of the ground or in a privy, pit or cesspool, assisted by the falling rains, eventually reach the ground water, and seeping through the shallow strata of earth, eventually find their way into the well or spring, and pollute them. In many instances, too, the ground water contains the specific pathogenic organisms of the water-borne diseases, such as typhoid fever, bacillary and amebic dysentery and diarrhea, and in addition to the pollution make the use of the water dangerous for domestic use and a risk to the health; for in using such water, the occupants of the house would be literally drinking their own excreta. Also in addition to the danger of conveyance of the pathogenic organisms to the system in the food and drink by flies and insects, where the privy is not properly closed, or is open at the back, animals, such as dogs and hogs, chickens and ducks, have access to the excreta and further disseminate the pathogenic bacteria contained therein, by scattering the excreta about on the ground and further polluting the soil, and eventually the drinking water, as has just been described.

It is by the above method chiefly that hookworm is disseminated in the South, by soil pollution from improper and unprotected and hence unsanitary privies and other equally as bad methods of disposal of human excreta, as practiced in rural districts—the hookworm eggs being contained in the excrementitious matter.

These shallow wells, which are so extensively in use in the country districts and urban towns everywhere, are the poison of the farms and towns alike, and I cannot speak in terms too strongly in favor of their discontinuance. They easily and quickly become polluted by sewage and excrementitious matter from the nearby house; and illness of a serious nature from the use of the water is frequently the re-We now know beyond longer doubt that the chief souce of conveyance of typhoid fever is the use of impure water for drinking and other domestic purposes, while food and fingers play their part.

Having pointed out briefly some of the undesirable, insanitary and hence unhealthy conditions that exist in and about a farmhouse, what rules must be observed, say rather enforced, in the average country home, in order that the occupants may, as far as possible, be protected from disease, may enjoy more hygienic surroundings, and better health may be promoted:—

First—The location of the house is of great importance. If possible it should be placed on high ground, such as an eminence. It should be properly oriented so as to receive the maximum amount of sunlight throughout the day. The foundation should be constructed in such a manner as to keep the ground moisture out of the building. Then the house should be properly provided with a modern water closet and bath, also supplied with an abundance of cold and hot water, complete water connections, and a water carriage system, and be provided with proper provisions for heating, ventilating, and lighting, both natural and artificial. The sewage from the house, including all waste water and slops, should be disposed of in due manner, preferably by the septic tank or the Waring system.

If running water cannot be supplied to the

house in a practical and economical manner, the next best and most accepted method of excreta disposal should be resorted to, and the privy or outhouse must be located on the ground at a safe distance from the rear of the building, and be properly constructed and screened to prevent the ingress of flies and insects, and be provided with pail or dry earth receptacles, which should be emptied at regular and stated intervals, and the contents disposed of under strict sanitary precautions, as by burning, or burying at a safe distance and away from any possible source of water supply.

The water supply of such a farm house should be from a source of undoubted purity, a deep or artesian well, or in case this is not practicable, the spring, if one, should be protected from inflow of surface water, and when from the latter source, the drinking water should as a rule be boiled before using, this precaution being especially carried out during the prevalence of an epidemic of typhoid fever or other water-borne diseases in the vicinity.

In case of the poor rural dwellers whose small houses or cabins are located in the distant valley or in the fastness of the mountains, the risks to the health of the family, frequently ignorant and unlettered, are usually much greater, depending somewhat upon environmental and other conditions.

By reason of the often low pecuniary condition of the occupants (of such houses) the methods of promoting hygiene and safeguarding health in the farm-houses and homes will prove a most difficult problem in numerous instances to handle, and to successfully solve. The same sanitary rules and precautions as heretofore stated will apply equally as well to all, however, though they will perhaps meet with less success in many cases. The poor people of our mountainous countries as well as those of the lowlands, the former numbering some 21/2 to 3 million souls, should not be forsaken and left to their fate, the former representing as they do the only pure American stock, but every effort should be made, as far as possible, to help them, and provide for them the simple precautious and safeguards of health. In this class of farm-houses, too, the subject of lighting, both natural and artificial, plays an important part of the health role. To one unaccustomed to such sights, the fact of families living in houses without windows and shaded in gloom and darkness at mid-day is almost unbelievable

at the present time, but one has to go no farther away than the mountains of Kentucky, Tennessee, North Carolina, West Virginia and Virginia and other States, to be convinced of the aforegoing statement. The methods of artificially lighting these homes of the poor are also frequently inadequate and unsatisfactory, leading to eye strains, headaches and other discomforts, and eventually impairing the visual acuity. Poorly kept lamps, lanterns and even tallow dips are the common methods of illuminating these homes.

The manner of cooking and serving the food plays a very important part on the health status of the poor rural dweller, as also often elsewhere. Badly cooked foods deprives the person of much of the nourishment that would be contained in well prepared food of the same quality. This results in lowered vitality and energy on the part of the consumers, and renders them more liable to contract disease. The substitution of the boiler and the pot for the "frying pan" in the preparation of food will prove of much benefit, and will rid many of the chronic sufferers of rural communities from the pangs of indigestion and kindred ailments.

The excessive use of beverages, such as coffee and tea, to which many of the country dwellers and elsewhere, are addicted, has a detrimental effect on health, producing indigestion, insomnia, nervousness and allied disturbances.

The remedy for this is not so much good lamps, as well kept lamps, not so much good quality of food as the quality of food well cooked and the use of the usual beverages in more moderation.

The sanitary privy as described by Stiles and others of all measures suggested to improve health conditions in rural and urban areas, when universally adopted and put into use, will in my mind prove the greatest boon, because of its efficiency, its simplicity and its low cost, thus placing it within reach of all. It is sincerely believed no other sanitary precaution or measure ever suggested will promote hygienic conditions and prevent the dissemination of disease-containing human excreta in rural or urban life more than the use of the privy above mentioned.

The farm too, in the vast majority of instances, is susceptible of many improvements in a hygienic way. Where low lands, marshes, ponds and bodies of stagnant water exist, which might harbor or furnish breeding places for disease disseminating mos-

quitoes or other insects, ditching, draining and filling in will greatly promote hygienic conditions. Damp, low ground has also an injurious effect on health in a general way, by lowering the vital resistance, and thus permitting the contraction of tuberculosis, diphtheria, rheumatism, tonsilitis, and perhaps diarrhea more easily; and dampness acting in conjunction with a decreased amount of sunlight makes the conditions still more favorable to the development of disease, and the harboring of insects which disseminate diseases. Hence the farmhouse should not be located in or near a thickly grown-up tract of woodland, but should stand out clear and free from such light-obstructing and insect-harboring sources, although a limited number of trees for shade and ornamental purposes, provided they do not overhang the house, are desirable.

All stables, barns, pig styes, hen houses and coops, should be located at a distance sufficiently great from dwellings and source of water supply to prevent any possible contamination by flies, bugs and other insects by direct contact with the houses and also to prevent surface draining into the well or spring from such places. All outhouses and tenements of whatever nature occupied or used by help or employees should also be equipped and provided in the manner already stated.

All cows furnishing milk for home consumption, or otherwise, should be maintained in good health, in modern sanitary stables. The milk should be taken from them in a cleanly and approved manner in clean receptacles and preserved in cool and clean containers; and at stated intervals the herd should be subjected to the tuberculosis test, to detect any case of incipient tuberculosis.

The manure and refuse from all stables, animals, fowls, etc., should not be thrown out in the open and there left to serve as a breeding place for flies and other insects, but should be received in a dark fly-proof room and there remain until properly disposed of.

Many other subjects, some of a more or less aesthetic nature, which have an important bearing on the promotion of hygiene of the farm-house and farm, such as providing circulating libraries, moving pictures, music, societies, for diversion and amusement, and others, might well here be discussed, but time will not permit.

Having dwelt upon the unsanitary and un-

hygienic conditions within the farm-houses and on farms, naturally the question is asked: what is the solution of this whole problem? The answer is education in public health matters and the adoption of a state-wide policy of improved health measures. The splendid health organizations in force in some states, cities and larger towns, only need extension and increased scope of action to include rural districts in all of their beneficial operations, while others need to have health departments organized and put on a proper footing of efficiency.

Many of the public health problems of our country are difficult of solution, and will require the outlay of much time, talent and money. The latter is not always forthcoming from the State Legislatures, but with it in hand the other two can be obtained.

As has been said, what is most needed to improve and promote the hygiene of farm-house and farm is the arousing of public interest in all matters pertaining to hygiene and health.

This can be accomplished effectively in only one way, and that is by the public education, by lecture campaigns, talks, traveling exhibits, by interested organizations and individuals; and it is to be hoped soon through the rural district nurse to advise, and under the supervision of State health and sanitary officers, to extend assistance and spread public information on these important matters, bearing so closely on the essentials of rural personal hygiene, which will penetrate the most remote settlements, away from city centers; and by this means, and utilizing ministers, school churches, school houses, tents, stores, halls. or possibly in instances, moving train exhibits, that all residents of such districts can be reached and interested and instructed, and be brought to realize that life can be conserved and prolonged by observing certain and not difficult hygienic rules, thus insuring increase of health and happiness and in the end, greater prosperity in any rural

The greatest evil to-day in our rural states is undoubtedly the existing medieval sanitation. There are numerous sections in which sanitation in respect to soil pollution and care of milk is only one-tenth what it should be. The recent wonderful awakening on the part of the State Boards of Health and State Boards of Education

in respect to these points in certain sections of our country cannot be praised too highly. The initiative in solving these particular phases of rural needs is therefore taken, but time will be required for the development of public sentiment along these lines among these people, and for the passage and enforcement of State and local laws, that will decrease pollution of the soil and of the water and milk supplies.

District nursing is another sad and crying need of our farm areas. The average country woman, white or black, has exceedingly rudimentary ideas on the subject of cleanliness, housekeeping and care either of children or the sick. To meet the needs of this side of the problem the district nurse seems capable of playing a valuable role. Highly advisable in this connection is the adoption by the States of a universal policy looking to the improvement of methods of care for the sick in rural and small urban communities. A survey of conditions in rural districts will show that in case of sickness in families, the patients will

lack more or less of the care which their condition demands. The survey will show that a certain large percentage of those ill could not afford to pay for such care as required. It will also show that hospital and institutional care will be found to be most noticeably lacking, and that of the large number who require hospital treatment, only a small percentage receive it, and still a smaller number of those who should have been admitted to other institutions were thus dealt with. Another crying need which is inadequately met in rural districts is that of housekeepers for families in which there is no wife or daughter to look after the running of the house, or in which she was the person incapacitated by illness.

While this particular mode of procedure is not in line directly with the promotion of public sanitation in rural areas, it has a most important bearing on this problem, and has for its object the bringing about the betterment of the treatment of the sick, and thereby indirectly promoting health in any community whatsoever.

SWIMMING INSTRUCTION IN BALTIMORE BATHS.

By A. S. Lowsley, Baltimore, MD.

At each of the open air free baths, my assistants and I have regular hours at which our school of instruction meets. These stations are four in number and are exceptionally well patronized by the young and old of both sexes, though at separate times.

Departing from the old idea that it was necessary for everyone to learn the breast stroke first, we have endeavored to teach the would-be swimmer to stay afloat with any stroke that seemed to be the easiest for that particular individual.

After a great deal of experimenting previous to my work with the Public Baths, I had decided that the simple stroke called "doggie" is by far the easiest for the beginner and in the Public Bath Classes we have taught it regularly.

Results have justified our adoption of this stroke because we find that the average 12 to 14-year-old boy learns how to swim at least ten yards in four lessons. A great many lads meet this standard in two or three lessons, and it is not at all unusual for a strong boy with nerve to swim at the end of the first lesson.

After the pupil has learned to keep afloat, he is taught to dive and to use the other strokes such as side, American crawl stroke, back, trudgeon and breast strokes. We find that he masters the more difficult strokes rather easily because he considers himself a swimmer and has attached to himself a most powerful ally, namely, confidence.

Pupils flock to our schools in enormous numbers and we sometimes have as many as 175 in a class and necessarily our teaching is done en masse. The particular foot work or stroke is demonstrated by myself or one of my assistants and then the whole group are put in the water and try it themselves. We pass along and correct and encourage where it is needed.

Often with small children it is necessary to teach them very simple things like ducking their heads under water without having a nervous breakdown. Every beginner has to be taught how to kick the legs properly, hold the fingers together and breathe correctly.

We have places for them to catch hold of, then when they can kick so as to keep their feet up, we have them push back a few feet and dog paddle in to the float. Their swimming distance is gradually increased until they can swim 10 yards. We have set 10 yards as a standard and as soon as a pupil meets this standard we take his or her name, age and address and place it on file, besides publishing the names of all persons who have learned to swim in the paper and issue a certificate of efficiency in the form of this button (which I am showing you) which is usually worn in a conspicuous place, and the proud owner is officially a swimmer. We notice that progress is very much more marked after getting the coveted certificate.

The Public Bath officials have granted me the services of a woman teacher for part of her time who has charge of the girls' and women's classes. My other assistants are voluntary and I secured their services in this interesting manner: When I started out alone on this enormous proposition of teaching a whole city to swim, I saw immediately that I must have help, so I picked out six of the most intelligent of the good swimmers from among my own boys at the various stations and formed them into a club. constitution of this club states that its object is to encourage swimming in the City of Baltimore, to see that visiting teams receive courteous treatment, and to aid in teaching beginners to swim.

The results accomplished by the lads of the Baltimore Baths Swimming Club, who now number twelve, have been marvelous. They are always on hand and are of the greatest assistance in teaching beginners as they do a large part of my demonstrating for me. They assist in conducting the meets and there has not been a single visiting team stoned or "run" as the local expression is, since this club was organized. These boys enjoy certain privileges and it is considered a great honor to become a member, so there is a great effort made by many boys to gain membership. Last and least they are cracker-jack swimmers and divers and win

In order to encourage beginners as well as advanced swimmers, we conduct interstation swimming meats which occur weekly and each of these meets contains at least one event for those who have learned to swim this season.

There have also been efficiency tests conducted for which swimmers when they meet the requirements printed on this card—have received badges presented by the Public Ath-

letic League. As far as I know this is the only place where such efficiency tests are publicly conducted; although I may be mistaken about this point.

At the end of the season a big meet is held for all stations and the rivalry, although friendly, is very intense. This meet is always held at the Patterson Park Swimming Pool, which is conceded by all of our many visitors to be one of the best out-of-door swimming pools in existence anywhere.

At some of our exhibitions and contests demonstrations of methods of rescuing the drowning and the Sylvester and Schaeffer methods of resuscitating the apparently drowned are given and we believe that if even one person remembers enough of either of these methods to save a life, our efforts in this direction will be amply repaid.

Our figures of the numbers taught to swim are not very large because we have only been teaching three seasons and could spend much more time than at present at the various stations very profitably, but being a medical man I feel that my assistants and I have been doing good prophylactic medicine in teaching 2,553 individuals, of whom 559have been girls and women, how to swim at least 10 yards and not to get drowned should they fall overboard where swimming is necessary. We steadfastly believe that our most important work is to teach beginners how to swim and not to produce swimming champions.

The City of Baltimore is practically surrounded by water and by an unusually large proportion of our citizens indulging in pastimes that take them on the water, therefore swimming knowledge comes to be a very necessary part of each one's education and really should be taught in the public schools.

To take care of the swimming activities of a population of approximately 600,000 people, we have four public baths—Patterson, Gwynns Falls, Winans Beach and Locust Point, which are patrolled whenever open by an exceedingly efficient corps of lifeguards who have never lost a case due to drowning since I have been with the baths, although they are called into activity frequently.

There are several private places open to the paying public for swimming, the larger of which are Riverview Park, Gwynns Oak Park, and Bay Shore Park, and there are six strictly private indoor pools in the city, amongst them being the C. Y. M. C. A., Baltimore Athletic Club and Goucher College pools. As far as I know there is at present no swimming place in or near the city for the 160,000 colored population, but our superintendent, Dr. Beadenkoff, is now working on a plan to acquire swimming facilities for colored people.

Our method of swimming instruction described above has been applied with most

excellent results in my work at the Baltimore Athletic Club and Maryland Swimming Club.

In conclusion, I wish to publicly thank Dr. Thos. M. Beadenkoff and the members of the Bath Commission for their hearty cooperation without which our efforts would have but amounted to little.

THE NATIONAL WOMEN'S LIFE SAVING LEAGUE.

By Katherine F. Mehrtens. Read by Mr. Eisenbrandt.

In speaking on the importance of swimming and life-saving instruction for women, a few words on the work of the National Women's Life Saving League might be apropos.

Instruction in this subject, especially for working women employed during the day, seems to have received its first serious consideration in New York City by the League, now in existence about three years. enthusiasm that greeted the work and the great demand upon it, was far in excess of anything we had expected. We knew that facilities for this work were necessary, but we did not realize how strenuously our efforts would be immediately taxed. bership applications began to pour in from stenographers, school teachers, clerks, saleswomen, etc., etc., who wished to avail themselves of our instruction, until our membership has reached a thousand.

From this it can be seen that the organization started to fill a long-felt want with very limited facilities.

From our experience, it has been conclusively shown that swimming should be taught to girls and women and is just as important as for boys and men, and that the best results are obtained where the instruction is given by their own sex. Heretofore, this phase was not given consideration, and when the opportunity was presented (by the League) it was grasped.

The subject of swimming must be taken up, sooner or later, as a breach of elementary education in every locality. The confidence that swimming gives the individual, its health-giving qualities, and the many lives that will be saved annually, when swimming is an accomplishment of every boy and girl, are points for the consideration of every community. The number of drownings that occur every year among women and children, particularly during the summer months, is appalling, and can be and will be immeasurably decreased when our towns and cities through their educational authorities, spread the knowledge of swimming and supplement it with the rudiments of life-saving, in a systematic manner.

Swimming is an art that becomes so fascinating and bears such excellent health-giving benefits, both to women and children, that it is hard to understand how it has been so long neglected in the education of women. No other, form of athletics gives such allaround exercise and is so well adapted to women. To the young woman all day confined to an office, or the teacher to her classroom, the saleswoman in the store, the dressmaker and milliner in the shop, and the numerous other varied occupations, a plunge in the swimming tank and a moderate swimming exercise, is a recreation and a blessing, giving her undreamed of recuperating bene-To the housewife, whose duties keep her so closely at home, an occasional swim is a recreation that she can avail herself of any time of the day when she has a little leisure. And all these wonderful benefits which cost so little to the locality (comparatively) and nothing to the individual, and which mean so much from a health and sanitary viewpoint as well, are not yet within the reach of all.

From the foregoing remarks, it can be seen that I am endeavoring to advocate, in every city, large and small, not only the facilities for the teaching of swimming, but facilities for young women to practice swimming during the twelve months of the year; in other words, indoor pools. amount of good that would result, would more than repay the outlay. In many small towns the regular swimming pool, generally patronized or only open to boys, could then be thrown open to girls also, and a system of instruction inaugurated at little or no expense. An expert swimmer, preferablya woman who would volunteer to teach others-can generally be found willing to give her services for the benefit of this humanitarian cause. For a start, an organization planned along the line of the National Women's Life Saving League might be established and the importance of the work would soon demand public recognition.

Health-giving athletics for women, conducted by and under the absolute jurisdiction of women, tend to their moral and social uplifting. Promiscuous competition among men and women is not advocated, although this is generally indulged in in the large cities and draws big crowds.

In conclusion, it might be emphasized that the knowledge of swimming, without the additional knowledge of life-saving, loses considerable of its importance. It is therefore essential that as soon as pupils have mastered a few good strokes and are confident of their buoyancy and endurance, that they take up the three main features of life-saving, namely, Rescue, Release and Resuscitation. Not alone is a knowledge of the above a benefit to the individual possessing it, enabling her to better care for herself, but it also creates a spirit of unselfishness in the desire to help others.

The League will be glad to give information on these subjects any time on request.

CLEANLINESS AND HEALTH.

By Douwes Dekker.

A FOREIGNER who witnesses a great spring-cleaning in Holland returns home with the conviction that no people on earth can be compared in cleanliness with the Dutch.

I must hesitatingly confess that the highly praised cleanliness leaves much to be wished for, as far as it concerns the cleansing of the skin.

It was chiefly physicians who drew attention to it, when the military surgeons examined the conscripts and those who had to examine women who applied for places at the Government schools. The causes were sought, and they were manifold. With some it was laziness, so-called religious opposition against so much worldly-mindedness with others; other people did not think it decent to undress themselves

entirely, and last but not least, the want of opportunities to bathe, especially in winter. An inquiry made into the matter brought to light that although there were bathhouses where people could get a bath at the cost of 20, 30 and 50 cents, the baths were entirely beyond the reach of the lower classes except in Maastricht, Arnhem, Nymegen, Twolle and Deventer, where baths were to be had at moderate prices.

And so some twenty years ago the public baths were erected by the devotion and sacrifice of a few persons, where people for 6 cents could get a warm and cold rainbath, soap and towel included. Dutchlike, things were however prepared too carefully and much too slowly. So things were dragged on until the year 1889, when some public-spirited and philanthropic men un-

der the initiative of Dr. Ruysch, formed plans for the foundation of an association with the purpose to procure warm rainbaths for the lower classes at a moderate price. From these discussions there arose after numerous requests and often vain efforts to get help and financial support from well-to-do inhabitants, the first public bathhouse in The Hague, which was opened in 1892 for the public.

The idea that it was necessary to procure cheap baths to the less fortunate classes of society soon found its way beyond the court capital and in a short time several establishments were erected in other towns.

The association which in the beginning had to fight against great opposition, began with 63 members. It now has 800 members among whom 12 city councils, 64 boards of health and several associations, amounting to thousands.

It advanced slowly and the work required an extraordinary perseverance to surmount all prejudices. People thought it quite useless.

Fortunately the experiments of the hygienists and bacteriologists came to the aid. They announced and proved that contagious diseases were transferred by vermin. It was proved that pest was transferred by the so-called pest-flea, recurrence by a louse, head diseases by head-lice, etc., etc., and that the only real method to fight these diseases is: promoting cleanliness. Cleanliness has more power than the quarantine with its severe seclusion and its draconic prescriptions, which means had to yield to the spraybaths, which led hygiene in entirely new paths.

Let me give you some examples.

In Petersbourg, where till lately in the night-asylums typhus raged with untamable force, and daily required a great number of victims, the violence of the disease decreased since the use of the baths and the disinfecting of clothes and rooms was compulsory, and finally it disappeared altogether.

A second illustration: In this way was also put bound to the recurrence in the town of Tunis during the years 1910-1912. Before that time the spreading of the disease was fought with sulphur smoke, but without any result. When it became more and more apparent that vermin were the cause of the transferring of the disease an entirely different method was applied. Where the dis-

ease appeared all the members of the family of the patient, even the neighbors, were brought to the public bathhouse, rubbed with camphor oil and soaped and douched with a strong spout of water. In the meantime the houses and clothes were disinfected.

In this way the vermin and all the germs of contagion were rendered innoxious and now the disease, which formerly made such enormous ravages has almost disappeared.

With these examples before them the Conference Internationale Sanitaire, 1911-1912, at Paris, did not hesitate to modify Article 8 of the Paris Convention on the proposition of Dr. Ruysch, our president, in such a way that where formerly it was strongly prohibited to approach a pest patient and a mother was not even allowed to visit her child nor a woman her husband. This is now permitted, provided that the visitor takes a bath after his visit and has his clothes disinfected.

The need of bath establishments, which has been proved so irrefutably, gradually gained ground. The desire to exchange of thoughts with others and to find help and support also beyond the frontiers of her country caused our association to venture an attempt to convoke an international conference at the occasion of her 10th anniversary. Her appeal found a ready ear, and she was very much pleased when not only the European delegates from all countries, but also the American colleagues joined and the cities of New York, Brooklyn, N. Y., and Baltimore were also represented.

I cannot leave off here without bringing a message of the Dutch women, who have promised to better themselves. Oh, I would, I could have come to bring it myself, this message, to invite our American sisters to collaborate in tilling the rich soil, which is lying open before us.

For the promoting of public baths and school baths is especially a question of women. She is responsible for the cleanliness of the family and the house, whatever position she may have, whether she be the mistress of the house or the servant, a cook, a nurse, a teacher or a sister of charity. People do so much for the sake of charity, but is not health the greatest treasure on earth? Society, her family, her child, her own self require that she go out to preach cleanliness and thus help to promote the establishing of bathhouses.

And now, allow me to thank and to pay homage to those men who have saved neither time nor trouble nor money to embellish our exhibition at Scheveningen in August, 1912, by their most interesting exhibits, and to support a cause of so great an importance and such far-reaching consequences. May this aid from America, given by Mrs. Tunis Bergen, Mr. Wm. H. Hale and Mr. Wm. Paul Gerhard from Brooklyn, and Rev. Beadenkoff from Baltimore, be increasing forever in our young, newly-founded International Association for Public Baths and Schoolbaths.

We believe that no greater work for the social betterment of the people in each land,

for the international concord and amity can be done than that of combining all nations in the common task of removing the degraded conditions which have come down from the neglectful past and we are confident that with the advent of a healthier and saner civilization the minds of men will be more open to the higher influences of peace and goodwill amongst men.

We hope that our nations not only remain bound by the old ties but will also fight together under *one* banner and for *one* device: CLEANLINESS AND HEALTH.

MODE OF LIFE MORE IMPORTANT THAN SANITATION.

By Dr. C. Hampton Jones, Asst. Health Officer of Baltimore, Md.

I believe we have the greatest number of negroes of any other one city in the Union, except, perhaps, Washington. The actual number of negroes is 85,750, according to the mid-year estimate of July 1st, 1912, based upon the United States census of 1910. At one time we thought there were about 91,000, but that was based on the inter-census calculation from 1890 to 1900, but there was not such an increase as we thought.

Now when we look to the death rates, we find that as far as Baltimore is concerned the high death rate of the city is greatly due to the death rate among the negroes. In 1912 our general death rate, including nearly 600 people who came here to die from outside the city and outside of our state, was 18.33. Separating that into white and negro population, we find the white population showed a death rate of 16.05, while the negro death rate showed 29.67. Naturally we look to the improvement of the negro race from a sanitary standpoint to reduce our death rate, but because of the numbers of the negroes, about one-fifth of our population, the reduction would have to be very large in order to reduce the total death rate to fifteen or less.

We find that the cause of this high negro death rate is due to several things. Unfortunately, this city like others, has not made any intensive study of vital statistics. Even the best city in this country in this work has not accomplished the intensive study that ought to be done in order to permit us to say definitely that this thing or that thing actually is the cause of the high mortality. Therefore, we have to speak in general

terms and without specific statements concerning the sanitary condition of a city to determine to a certain extent the death rate. We expect a clean city to have a lower death rate than an unsanitary city, but how much of the death rate is due to uncleanliness we cannot say, because filth does not produce disease, and where filth abounds among a large number of our foreign population there you do not find a high death rate. 1 speak of the Jews especially. They live among conditions that are most unsanitary, and yet their death rate is lower than among our negroes. Here we find the worst condition of any portion of our populace, and yet they are not all so surrounded. But we find the better class of negroes are living under as good conditions as the vast majority of whites, but when we do find unsanitary conditions they are the worst in the city. Undoubtedly with the establishment of the new sanitary sewers, we will be able to effect the death rate among the negroes by the improvement of the drainage from their houses. In many quarters you will find the open privy wells exceedingly close to the house, but I do not believe that that condition actually produces sickness; I do not believe it actually produces death except that when illness is introduced, the death rate is naturally higher.

A second factor that is commonly looked to is the housing of the people, and among our negroes we find they are in houses that are of the worst type, not only in the size of the rooms and overcrowding, but in the amount of sunlight that is admitted. It is not such a great factor as many are inclined to assert.

Third, the feeding of the people, which so closely depends upon the amount of money they can get or the amount of food they can obtain in various ways. As to the feeding, you will find as a rule that they are well fed. You will find starvation or the effects of the want of sufficient food more prevalent among the whites than among the negroes.

These three factors, which I would like to dwell on more specifically in order to show the effect of each one, yet personally I do not believe that they are of such moment as certain other factors that I would call your attention to. Sanitarians are, I believe, beginning to put greater stress on the individual rather than his surroundings. surroundings of an individual undoubtedly do affect that individual, but the individual's own acts are those which will produce the most profound effect upon him. Therefore, wherever you have a high death rate look to the question of debauchery. nately a large proportion of our negroes are those who are debauched in one way or another. What the percentage is, I do not know. It is merely an impression one gets going among them that the drinking, the late hours, the excesses of various kinds, must have a profound effect upon them. Then closely associated with this you have the presence of venereal disease. That has not been worked out. I told you when I began to speak that nothing has been worked out definitely, but the impression upon me is that the various venereal diseases are present to an unusual extent among the negroes. They seem to be utterly careless to the presence of such manifestation. And finally we have a special disease, tuberculosis.

Tuberculosis, venereal diseases and debauchery undoubtedly produce an effect upon two special parts of the community. As you know, the lowering of death rate of the city must depend upon our ability to control the death rate among children, and looking to this particular point, we find that in 1911, which was the report I had at home last night, the children under five years of age, and practically it is confined to children under two years of age, there were of the white people 1,964 children who died, of the When we take the rate per colored 760. thousand, we find that the negro children are dying off more than double that of the whites, and this is due, I believe, mostly to tuberculosis, venereal diseases, and debauchery of the parents. Looking to the tuberculosis disease alone, we find that among our negroes the death rate is not lowering at all, the death rate is slowly increasing, and it stands about 5.7 per thousand, while the white death rate is about 1.75. The whites have been gradually going down, while the negro death rate has been gradually going up.

I cannot help but believe that the basis of the improvement of public health, the lessening of the death rate, the lessening of the morbidity must be finally due to the individual's activities. A municipality may, but the individuals of the municipality must be the active agents in carrying out that which is recommended. cannot by a rule of the municipality obtain good health. You must obtain it only by the people following that rule. Therefore anything that is of actual help, either by its direct effect or its indirect effect, must be hailed with pleasure by all sanitarians, and I do not know anything that has a greater value than the work that you are doing, carrying to the individual the necessity for him to do that which is for his own protection and betterment when you present to them opportunities for cleanliness. It not only gives them the effect of the cleaning, but it also presents to them the moral uplift, the showing them, as it were, a better life which is bound to effect other conditions and therefore finally produce the desired end.

DISCUSSION.

Dr. Baruch:—I cannot altogether agree with all that Dr. Jones has said. I regard the sanitary dwelling as far more important than what the man does himself. Even the poorest people will get along better without the baths, as much as I favor them, than they will get along without sunlight and fresh air. Then, too, tuberculosis, which is the most destructive disease we have to deal with, is due to the absence of proper dwellings and proper environment. As I said the other night, about 60,000 school children of New York have tuberculosis. There bad hygiene fructifies the soil and carelessness of the individual sows the seed, but in any case it is propagated by the individual who has the disease is not influenced by the surroundings. I want it understood that I do not believe that the action of the individual is more important than his surroundings. The great cause of tuberculosis is the facility with which the tuberculosis bacillus thrives in the dark, like all evil things. The sunlight destroys it. Drainage, fresh air, and especially the sunlight are the chief enemies of tuberculosis. What Dr. Hale said in regard to the Jewish people having a low death rate despite the fact that they live in filthy conditions is difficult to believe.

Mr. Beadenkoff:—I should like to corroborate Dr. Hale. My observation has been that they are very filthy in some places.

Dr. Baruch:—I did not know you were speaking of your own observation. point is this; that the fact that a good many of these people have survived a long time is simply because they are fortunate enough to have the germ of survival in them. Some people you cannot kill at all. Why is it you see so many healthy looking children in the tenement districts of New York? I contend it is because of the law of the survival of the fittest. That is the reason why those Jews survive. They come from a long-lived race. The fact is that these people have inherited longevity, and that may be the reason that they survive despite their unwholesome surroundings.

Mrs. Jacobson:—These people are new to this country and our civilization, and just as soon as you find that they do become citizens, they usually move to better quarters. They are not content to live in the quarters in which they have been brought up, and they soon learn that the conditions are not conducive to their best interests. You do not find people in the third or even the second generation living in the same kind of quarters.

Dr. Baruch:—In New York many of the people who lived in Hester street when they first came over have moved to Fifth avenue, in the upper part, where Hebrew signs betray their presence.

Mr. Beadenkoff:—I should like to know about that germ of longevity.

Dr. Jones:—I do not like to take up your time more particularly to discuss a matter which to settle would probably take a quarter of a century at least. We do not know. Mr. Chairman, there has been no scientific work of any value whatsoever that would give us a right to make any positive statement as to the effect of housing on health. Every one of us, myself particularly, who am a member of the National Housing Association, wishes to make every improvement possible in the housing conditions and recognizes that it is a factor, which, of course, is closely associated with the sunlight and good food and other conditions. A question of the amount of money, the wages, comes in in the ability to lift all of these factors that are recognized by every sanitarian. There is an absolute dearth of reliable information as to the exact effect of this thing or that on health.

In regard to our friends, the Jewish people, the fact is that among the orthodox Jews, those that follow the great sanitarian Moses, have a longer life, have a lower death rate than any nation here in America. But America is going to wipe out (this is my own personal guess) the Jewish race as such because they are not segregated in any particular section of the town except for a short time, and therefore they are not compelled to follow out closely the laws of Moses. You will find the Jewish people, after they leave the Ghetto, show a higher death rate than when they live among their

own people.

Every one must recognize the great value of all of the movements of which this is one, but I for one would like to preach a little about the personal habits of the individual. The orthodox Jew is not debauched in any sense of the word, and furthermore they nurse their own children.

TRANSACTIONS CONTINUED.

WEDNESDAY, MAY 14TH.

Mrs. Mary Jacobson of Newark read a paper on "Campaign Work for Promoting Public Baths" with lantern slides and moving pictures.

Mr. H. C. Mueller of Trenton, N. J., read a paper on "Tiles, Its Sanitary and Decorative Value in the Construction of Publis Baths."

The several papers were discussed at length.

The president was appointed a delegate to represent the association at the meeting of the International Association for School Hygiene to be held at Buffalo on August 25th to 30th.

The three delegates to the International Conference on Public and School Baths at The Hague read their reports.

Abstracts of Dr. Gerhard's and Mr. Beadenkoff's report on page

Dr. Hale's report was printed in The Sun, one of the city publications, and in the New York Sun.

Mr. Charles A. McCall invited the association to hold its next meeting at Newark, N. J.

AFTERNOON SESSION.

Papers were read by Dr. William H. Hale on "A Municipal Department of Public Baths and Gymnasia."

"Relation of Public Athletics Work to Public Baths," by Dr. William Burdick, Director

"Recreation Commissions of Large Cities," by H. D. Tutweile of Indianapolis, Ind.

MEETING ON THE 15TH MAY, 1914.

Mr Mueller presented a resolution favor-

ing School Baths. Carried.

Mr. Windolph handed in a proposed amendment to the Constitution, abolishing the office of Permanent Secretary.

Papers were read by Dr. C. H. Jones on "Sanitary Conditions Among the Colored People."

"Hygiene of the Farm House and Farm," by Dr. J. A. Nydegger, delegate from the United States Public Health Service.

"Public Swimming Institution in Basti-

more," by A. S. Lowsley.

"The National Woman's Life-Saving League," by Katherine F. Mehrtens (read by Mr. Eisenbrandt).

"Cleanliness and Health," by A. M. Douwes Dekker, Secretary Nederlandsche Vereeniging Voor Volks- en Schoolbaden.

To fill vacancies caused by expiration of their terms of office a nominating committee was appointed and their report was accepted, the following being elected:

President, Dr. Simon Baruch, New York. Vice-President, Mr. Thomas M. Beadenkoff, Baltimore, Md.

Secretary, J. Leonard Mason, Newark,

N. J.

Newark, N. J., was selected as the next place of meeting on May 12th, 1914.

Resolutions of thanks to the Mayor and Aldermen, the Bath Commission and people of Baltimore were offered by Mrs. Mary Jacobson and adopted with enthusiasm.

THURSDAY MORNING, MAY 15th.

Mr. Beadenkoff:—I should like to suggest that this association make two recommenda-

tions, that the importance of school baths be urged on cities that have none—

Mr Muller:—I just want to say one thing more. My opinion is that instead of trying to do too much we should start in with one thing. I have often seen a good proposition killed by trying to cover too much territory. If you try for one thing you are more apt to be successful with it.

—I understand that the resolution as offered is intended to include all schools in the United States. It has just come into my mind how these baths should be extended to rural communities. There is no water in rural school buildings, and what water is used for drinking and washing purposes is carried in in a bucket. I think the resolution as offered can only extend to the cities and larger towns, because the conveniences of rural schools are not so that the baths could be used.

Mr. Windolph:—I would like to move that a committee on arrangements be appointed to publish the proceedings in pamphlet form for distribution among our members as well as the general public.

Dr. Hale:—It is a great undertaking to publish these proceedings in proper form and shape and it would devolve upon the permanent secretary in this case. Another thing is the lack of funds. We cannot publish all the stuff we have. The editor must designate and differentiate and he must cut his cloth according to his measure, he must spend what money he has in the most judicious way. Mr. President, I offer an amendment, that we submit the publication of the proceedings to a committee on publication with Mr. Beadenkoff as editor.

Mr. Beadenkoff:—I am willing to do what I can toward it.

DISCUSSION OF DR. NYDEGGER'S PAPER.

Dr. Baruch:—Whenever an officer of the United States Public Health Service talks on sanitation, you may be sure that the subject will be so thoroughly illuminated that it doesn't require a trained mind to understand it. This paper is a very practical and useful one, and I should like to hear it discussed.

Dr. Sherwood:—There is one question I should like to ask. I was particularly struck with the facts brought out with reference to the need in the rural farm houses of the sanitary privy. At a recent exhibit here at a meeting of our health committee of the State Medical Society, we had the

models of these constructions presented. I was wondering whether there was any possibility of bridging that long chasm between the scientific knowledge of a need and the putting into practice the knowledge that we have. We suffer so much, it seems to me, from inertia, and the question I should like to ask is whether there is any power in the health bureau which you represent or in any national health bureau to enforce the construction in rural communities of such sanitary privies.

Dr. Baruch:—The chair would like to add, if no one else will speak on the subject, that there is nothing in this paper that really requires discussion. It is so plain and easily understood that it would be refining pure gold to say anything about it. I would only make one remark about the The facilities for sanitadrinking water. tion should be made fool proof, a thing that is very difficult to do. We have had a paper at this meeting which will help us to make the water fool proof. The suggestion I would like to add is that these simple-minded people might be instructed to have a clean pail to use for their drinking water, to have a piece of clean bagging. of which they have large quantities. made loosely for a cover over this pail and let some child pour the water through this filter into this pail, and then afterwards add a quarter of a grain of hypochloride of lime to twenty-five gallons of water. I think in that way you will destroy all germs and make it practically fool proof.

Mr. Beadenkoff: May I ask another question? For the smaller towns, about which you spoke, this portable bath construction has been criticized because it requires a large water supply, or a supply of an inch or two of pretty good pressure to run it. Many of the farm houses are supplied only with wells. On that account, I suppose, it is not possible to make more provision for the flow of water, unless you have a tank, and that must be built at the proper height. I believe it is one of the defects of many of the smaller towns that the water supply is not sufficiently strong to sustain what we are here more especially for propagating, that is, teh use of shower baths among country people.

Mr. Nydegger:—In reply, I am sorry to say there is no such law that I know of which compels the inhabitants of any State or community to supply such sanitary privy or outhouses. The public health service al-

ways stands ready to assist as far as possible and as far as within its means by co-operating with State departments or municipal health departments in instructing and telling the people of these communities how to supply these precautions. This sanitary privy is a very inexpensive building, the material going in it can be provided for a few dollars' outlay and any man or boy could construct the building and could make a perfectly sanitary building if it is placed and provided with receptacles for the disposal of excreta. The whole thing depends on the management.

In regard to extending aid to people in rural communities, there is a movement on foot now, there is a bill before Congress providing for an appropriation of \$25,000. This will be used in the mountains of Kentucky, Tennessee, and possibly West Virginia, in trying to help these people, who are badly afflicted with trachoma. It is the idea to send me down there with portable hospitals and provide treatment for the people with no cost to themselves. Trachoma is a disease of the lids, a very highly contagious disease, communicable by means of towels, handkerchiefs and fingers from one person to another. Trachoma at one time was brought into the country mostly by aliens, but we now find there is quite a lot of it in our own country, and particularly in the mountainous districts of some of our Southern States. This disease when once contracted is very slow to get well, and in some cases leads to blindness, in all cases to some impairment of the vision. It may require a year or more to get well, some cases are incurable. When the disease goes on the ball proper, you have loss of vision.

Mr. A. S. Lowsley:-Written.

Mr. Jackson:—Have you ever found anyone who could not learn to swim?

Mr. Lowsley:—I have found a few men who said they had tried to swim all their lives, but I have not worked with anyone consistently, who if they had stayed with me could not learn to swim five or six yards.

Mr. Beadenkoff:—The pool at Patterson Park is only three and a half feet deep at one end so that it is safe for little children. Mr. Lowsley gets into that large pond or enclosure and teaches the boys in that swimming school. We are very proud of the fact that one of the boys who was a learner in these classes saved his brother's life. They were together at a little picnic and a little fellow, the smaller of the two,

fell overboard, but the older of the two jumped in and pulled him out. He had learned to swim at Patterson Park, and he knew he could pull him out. I remember the wife of a pastor of a church near the park, I think she was a woman of about forty-five, went there to learn to swim. And she did it. I do not know how many lessons she needed, but it shows that the time of learning is not only for children.

Mr. Grasty:—Have you any plans for the colored population?

Mr. Beadenkoff:—I am sorry that at present the only provision made for the colored swimming in Baltimore is the indoor bath, but the colored men and boys are, of course, equally entitled to visit our baths.

Resolutions read by Dr. Gichner. (Resolutions to thank the Mayor and City Council and city officials, the Public Bath Commission, and the United States Public Health Service, etc.)

The Nominating Committee reported the following officers:

President-Dr. Baruch.

Vice-president-Mr. Beadenkoff.

Recording Secretary—Mr. Mason of Newark.

Treasurer—Mr. Windolph.

Member of Board of Directors—Dr. Gichner.

These gentlemen were duly elected. The office of Permanent Secretary having been abolished, no nomination was brought in.

THE HYGIENE OF THE CARBOHYDRATES.

By John C. Warbrick, M.D., Chicago.

THE various classes of foodstuffs taken into the body from time to time to serve as fuel for its sustenance after being masticated and changed by the active processes seem to still come under the same three headings that have stood for many years, namely, the Proteids, Carbohydrates and Fats. This division it would seem is not likely to change for a long time to come, while the continued discussion goes on as to what kind of food is best for one's physical being to keep it in good health, that from the animal or vegetable kingdom. It would seem almost an easy matter to be able to decide what is the proper kind of food to take from the great variety to choose from, however, this is not exactly the case, and it is hardly to be wondered at on account of the differences in temperament and peculiarities of individuals, as, for instance, in one case it is known a certain man has never been able to eat fish of any kind although he is in good physical health, while others can eat fish and prefer it to almost anything else. When the statement made by some authorities goes broadcast that children can eat all

the carbohydrate food they wish in the way of all kinds of candies without restriction, it seems to me the investigators working along this line have made a serious mistake.

In my opinion one of the quickest ways to injure the health of children is to allow them to eat all the sweets they desire without any regulation; in fact, it is a mistake to stuff children with any kind of food, to say nothing of candies, for there is more danger in over feeding than in under feeding, if I am not mistaken, especially in the earlier ages of childhood when the tissues are susceptible to changes.

If children eat all the carbohydrate material they wish in the way of sweets, they will not only contract bad habits but run the chance of injuring and undermining their constitutions for life, unless some regulation is followed as that is not a good way to begin with a child for life's journey.

Many children will be eating sweets all the time whenever they can get any, thus gorging themselves upon many occasions; ruining their teeth and digestion, for it is well known that children always have a special liking for the sweet material. Now sweets of all kinds are composed entirely of carbohydrate material or fuel for heating the body, so when taken internally in large or small amounts especially in between meals and on an empty stomach, tend to overheat it, cause headaches, malaise, neuralgia, toothache and enervation of the body. Carbohydrate material as a diet alone or in excess in any form acts as an irritant to the mucous membrane of the stomach and causes catarrh and disturbances of the sensory nervous system; in fact, this may be one way to cause an eczema or produce a psoriatic condition of the body.

Yellowness and paleness of the face is caused by this food while a tired, languid feeling is soon brought on because it does not strengthen, but heat or overheat or burn, it may be said, too much while a person is more susceptible to cold for that reason and coughs or bronchial trouble are also brought on along with other things.

If older people can be affected by an excess of carbohydrates in various ways what effect must they have on growing children and more so those inclined to be delicate? What happens to children fed too much on hot bread, hot cakes, pastry and sweets for a short time? Ill health, nervousness and loss of vitality. Who cannot remember an instance of some child feeling sick from being stuffed with too much hot bread or sweets and complaining of a 'tomach ache?

Now feed a dog entirely on carbohydrate or starchy material non-nitrogenous food and what happens? It will soon emaciate and die in a short time, for its tissues are not renewed by this food nor strengthened, but it may be said burnt out.

Now give a man the same kind of a diet and he will soon waste away and die for the same reason.

Then if children are allowed to eat all the carbohydrate material they want, it is readily seen what the effect is going to be on the body in time.

Nitrogenous food, of course, is always

required to renew the tissues which become wasted and worn during the activities of life.

To take one class of food all the time as a diet whether proteids, carbohydrates or fats, is not good as a mixed diet of all kinds of material seems to be the best for the body welfare, both mental and physical, then it gets all the elements necessary for its maintenance and functioning children will be almost certain to take enough carbohydrate food in the way of good or bad.

White bread, pie, cakes, sugar, etc., to do them harm without indulging freely in all kinds of sweets as they please for any length of time, eating them at all hours and in between meals which is bad. It is much better to take candies or sweets of any kind after a meal, the noon or evening meal being better than in the morning on top of some food, instead of taking them on an empty stomach because they then become mixed up with the food in the stomach and do not exert any injurious effect, but to eat them at all hours of the day, either for grown up people or children is bad, as the stomach is never empty, never gets a rest, in other words, the body is coddled into ill-health from repletion. A bad carbohydrate combination that is taken regularly almost every day by hundreds of people who eat quick lunches is that of pie, coffee and dough-This, if continued any length of nuts. time, would soon cause irritability and nervousness, as it contains little or no substantial nourishment for the body tissues.

A much better combination would be coffee, a baked apple and toast or rye bread or a rye bread sandwich, while there are many other combinations that are far better to take which do not produce any ill effects. Some sweets are all right in their place, but the proper use of them is one thing and the abuse, another.

It would then seem a mistake for any one to advise children to eat all the sweets they want without any restriction whatever as to amount, time of day or any definite rules regarding them.

RURAL SANITATION.

THE CONSERVATION OF AMERICAN FOOD PRODUCTS.

By M. E. Pennington, The U. S. Department of Agriculture.

No other civilized country wastes foodstuffs as we waste them. If all the crops that the farmers raise were utilized; all the meat animals that are killed eaten; all the fish that come into the nets marketed, hundreds of thousands who are now hungry would be well fed and the agitation on the subject of high prices would not attract much attention. Conservation of foodstuffs, in its broad sense, means not only the saving of the excess production of flush seasons for the seasons of scarcity, but it means also the systematic, scientific care that prevents wormy apples, or windfalls, prevents the fermentation of carload after carload of corn, prevents the rancid butter from the dirty farm, or the rotten eggs, or the tainted chicken.

The toil of the farmer results in the production of foods. Faulty handling, from the time the apple is ripe, the egg is laid or the fish caught—for in essentials our fishermen are comparable with our farmers—reduces enormously the amount which finally reaches the consuming center, and lowers to even a greater extent the quality of a large proportion of that which is saved from the crematory or the dump.

Go to any of the market terminals in this city on a summer Wednesday or Saturday, between 12 and 4 a. m., and see for yourselves the wastage of vegetables because of decay, low quality, or market gluts. Look at the spoiled poultry during a warm autumn such as we experienced last year—thousands of pounds of it. What are we doing, as broad-minded, intelligent citizens to acquaint ourselves with such facts and to assist, intelligently, those who are more directly charged with such responsibility?

For centuries we have conserved meat by smoking or salting, fish by smoking and drying, winter vegetables by earth cellars. Our great canning industry has so improved and developed the elemental principles of the housewife's "preserving" that it has

literally resulted in altering the face of the earth. Man now lives, healthfully, where he could not live heretofore. Canning foodstuffs has also served to equalize the seasonal supply, and is truly conservational. Latest in its development and broadest in its benefits and conserving power, has come refrigeration—again a great industrial development from the housewife's springhouse, or cellar or ice house.

To refrigeration, more than to any other single factor, must we look for the elimination of decay, the preservation of quality and the conservation of perishable products. Like "smoking," which means the preservation of the meat by the combustion products of wood; or "canning," which means that bacterial life is killed by heat, refrigeration must be specially and accurately applied if its maximum benefits are to be obtained. It must be combined with "good handling," as the broad phrase goes; that is, the perishable article must be put under refrigeration while it is sound and fresh, just as it should be canned while it is sound and fresh. National and State and municipal agencies are now endeavoring to inculcate improved methods of handling foodstuffs at the source of production, and frequently refrigeration is an absolutely necessary part of such methods. The railroads are adding refrigerator cars by the thousand each year, to haul these perishables safely. Refrigerated terminals are being built to receive them, refrigerated warehouses in which to hold them until they are needed.

Only one thing intervenes to prevent refrigeration as a conserver of both quality and quantity of food products from being the greatest price-equalizing agency that we at present possess, and that is the ignorance of the consumer of the source and time of the production, transportation and storage of our food supplies. The cupidity of the dishonest tradesmen is fed by this ignorance. If the consumer does not wish to eat refrigerated products he should not be compelled to do so. But he will find that his winter bill of fare will show an overwhelming preponderance of salt pork, corned beef, carrots, turnips and potatoes. If he is to continue to have the cream of all the seasons the year around he must accept them preserved by

sterilization or refrigeration—more especially the latter. And to obtain to the full the benefits due him, he must have a more intimate, more exact knowledge of whence, and how came the food to the markets. He must lend the aid of his knowledge toward the solving of the food question, part of which is the saving of waste and the equalization of supplies.

GOOD STUFF.

THE Wolcottville Herald is strongly edited, and the proof lies in the following editorial in a recent issue.

KEEP THE TOWN HEALTHY.

The life of this town, like the life of a human being, should be held sacred by everyone who calls it home. This town, like the human being, needs nourishment and care if it is to become a factor in things material. A town is as likely to become ill, so to speak, as a man, woman or child. Who is to help it regain a healthy and vigorous condition, if not those who make it their home? The ills of a town are, for the most part, of such a nature that they can be prevented and those which are not can be cured. There is a remedy for every disease likely to inoculate a town.

Physiology teaches that cleanliness is a necessary adjunct to the health of the human body. This is true of this town. How about refuse and garbage? Is your back-

yard or alley such that you are not ashamed of either? Disease and sickness lurk in unclean places. How about the streets? would you travel over a bad street or road if there were a better way to go? If your neighbor had a truck farm from which he planned to sell you and your other neighbors his produce, and you and your neighbors sent to the city for your vegetables, could the truck gardener continue to raise produce? If your home merchants have purchased goods and brought them here for your convenience and you send to the city for the very same articles which the home merchant carries, can he consistently continue in his efforts to serve you?

Help this town to keep healthy, contribute your share toward the improvements necessary to make this town a beacon light—a leader instead of a trailer. If this town is good enough for you to live in it is unworthy of you to refuse to help in keeping it healthy.

PLANNING THE FAMILY MEALS.

THE foods which best serve certain food needs are discussed in a new lesson in the reading course for farm women given by the home economics department of Cornell. This lesson is called "Rules for Planning the Family Dietary," and it tells the housekeeper what foods to use to provide her household with the proper amount of energy and iron. Milk, eggs, meat, legumes, cereals, make living tissue grow; cereals, legumes, fats, sugars, and starches yield energy; milk, legumes, and whole cereals supply lime; eggs,

legumes, oatmeal, vegetables, and fruits produce iron. Mild-flavored, non-stimulating, simply prepared, and easily digested foods should make up the main part of every meal. Eggs should always be used, when they can be afforded—a wise consideration. Much water should be consumed, and fruit and vegetables used liberally. Cereals and cereal food which include the outer layer of the grain are better than those that have had this layer removed. And always, the age, vigor, and activity of the individual should determine the strength of his food.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

Leisure Hour was founded in the belief that the physician is but human; that he loves the beautiful in thought and sentiment as expressed in literature, and that he is at times surprised with technical matter. Short, crisp contributions on any of the subjects named in the sub-heading are invited to this department.

AMBIDEXTERITY.

THERE are educators who would train children to be ambidextrous; this is a mis-The best thing of all is to be righthanded; the next best is to be left-handed; the least desirable of all is to be eitherhanded, except in certain trades and occupations. In man's age long evolution it is, generally speaking, by his good "right hand that he hath gotten himself the victory" over the elements and over the brute creation. The lower animals are ambidextrous. All four feet being used for locomotion there is no lateral differentiation of function. cat strikes at an insect indifferently with either hand; a squirrel holds a nut impartially with both paws. Even monkeys and gorillas, which of all animals use the forepaws mostly as hands, there is ambidexterity, with no preferential use of one or the other paw. Among unfortunate microcephalic people, in whom the small headedness is due to arrested development, ambidexterity has been found to reach a proportion of fifty per cent. Our Bronze Age and Paleolithic Age ancestors were right-handed, as were also the earliest human beings of which geology or human history gives us any evidence; this fact is plain in the arts of Assyria, Egypt, Greece.

All nations, tribes, peoples have at all times preferentially used not only one, but the same hand, generally the right; and no one can to-day point out any race that is ambidextrous. The Japanese have been said to be by law and practice ambidextrous; but Baron Komura is the authority that such a statement is unfounded. Most people simply have got to be right-handed. Why? Because of human anatomy, which no human

being can change. We are generally righthanded because of the structure and organization of the brain, which prompts, directs and controls all voluntary movements.

The brain has two hemispheres, of which the right presides over the left side of the body; whilst the left hemisphere governs the right side of the body. Why is this so? The nervous system of which the brain is the main part, is made up entirely of nerve cells and their fibres. The nerve cells are the telegraph stations from which the actions of all voluntary muscles are directed; the fibres are the telegraph wires which transmit the messages to the muscles. nerve fibres, coming from the nerve cells in the brain decussate—that is, pass through each other, precisely as when you clasp your hands together and interlock your fingers; this decussation takes place in the median line of the brain and spinal cord. So that the nerve fibres from the left brain go to the muscles of the right side of the body; and vice versa. Therefore it is that functional differences in the two hands and arms are dependent upon differences in the two brain hemispheres, or the "left brain" and the "right brain," as they are called.

In most of us the left brain is more developed than the right, because the heart is on the left side of the body, and thus supplies the left brain more directly and with more blood than the right brain. Some say that the heart was in the beginning exactly in the middle of the body; and that this organ came to move to the left side of the body because our ancestors began to prefer the use of the right hand; others that the heart began to move leftwards, in

consequence of which the race became right-handed. It doesn't make any difference, however, which was the preceding phenomena; we just have to accept the situation as we find it to-day.

A very interesting point here is that the speech centre is for most of us in "Broca's convolution" in the left hemisphere. right has also its speech centre, but in ninety-six per cent. of us this is rudimentary and inactive. Now, damage to Broca's convolution by wounding or disease deprived the right-handed man of speech; but leaves the left-handed man with speech unimpaired. The latter (man or woman) can talk just as well as ever. But in the lefthanded man the contrary holds good; his speech centre is naturally in the right hemisphere; injury to this will deprive him of speech.

Consider further that the hand and arm centres in the brain are intimately united to the speech centres; wherefore the preferential use of the right hand and arm is also due to the leading part taken by the left Thus, for most of us righthemisphere. handedness is woven in the brain; to change the pattern we would have to unravel all the nervous tissue and mechanism, and make the human body all over again. Go to-day into any regiment. You will not be permitted to use your gun left-handed; you have to be "uniform" with your comrades, and be right-handed in your evolution, just as they are. Here you would have an opportunity to note that right-eyedness is essential to right-handedness. The dominance of the right eye is shown in firing from the right shoulder and sighting with the right eye. Observe a left-handed soldier shooting; the military regulations require him to shoot from the right shoulder, but he will depress the right eye below the level of his piece and sight with the dominant left eye, because he is left-handed.

But, you say, soldiers always have to start off with the left foot first; yes, but this is because the spring, the essential thing in marching, must be made with the right foot. There is a very primitive and natural reason for these military customs, which have prevailed from Alexander's phalanx down to West Point. When men fought with sword or spear and shield, the soldier had to protect his most vital organ (his heart) with his left, his shield arm, and he fought aggressively with his right, his sword or spear arm.

Another interesting thing is that, in obe-

dience to the universal need of barter, or buying and selling, the primitive practice was counting up to ten. The fingers of the free, the right hand, were used first; and all fingers are now called digits, as are the fingers themselves; and the basis of numbering is the decimal or ten-fingered system. Taking men by and large, the southpaw, the left-handed man, is just as brainy as the right-handed man; but no more so. only thing not to try to cultivate (with some exceptions) is ambidexterity; that is, to try to be equally deft with either hand. One hand well trained is a great deal better than two hands poorly trained. The ambidextrous man will not be as skilled with either hand as the single-handed man is with his best hand.

Of course there are occupations in which a certain amount of ambidexterity is essential. For example, the pianist, in playing classical music must oftentimes produce the same tones with the left hand as with the right; and he has besides, to work a little harder with his left, because the base notes of the piano are more heavily wired than the treble. This is so in the fugues of Bach and the old masters in music. The surgeon must also be ambidextrous to a certain extent. And yet a double-handed man is likely to waste appreciable time wondering which hand to put to any given job.

Some people who favor education in ambidexterity say that if a clerk, for example. loses his right arm he will be handicapped in earning his living; but in such very rare contingencies education and practice soon develop an adequate growth on the right side of the brain, and left-handedness will naturally follow. Just as with the rudimentary speech centre in the right hemisphere. If a right-handed man gets his speech centre in the left brain injured he can in the course of time get his right brain speech centre so developed that he will be able to talk as well as before. The advocates of ambidexterity maintain that if we develop both speech centres people can talk all the better; it seems to me, in the present state of human affairs (our politics and so on), what is really needed is an improvement in the other direction.

But why, then, is anybody left-handed? In primitive times potentates were rather fond of lopping off the right hand or cutting out the right eye of such of their subjects as offended them. This may help to account for the preservation of the present four per cent. of left-handed people in the world.

THE SMOKE EVIL.

TIME was when a politically appointed smoke inspector reported as follows; "I certify that I have inspected the smoke of this city for the thirty days past. I find plenty of smoke and apparently of good Respectfully submitted—." forts for more scientific inspection of smoke, especially as to its insalubrious properties, the economic losses and the discomfort it occasions in great cities, have since been making. There have been prosecutions from time to time by health departments. For example in New York City a company was fined \$500 for maintaining a smoke nuisance. An exhibit in this suit was white paper that had been exposed for fifteen minutes in an apartment near this company's buildings; the paper was speckled black, and it was concluded by this showing that living near the plant meant damage to furniture, the ruin of hangings and draperies and—to say the least—personal discomfort. Yet it was admitted on all hands that the offending company had spent several hundred thousands of dollars experimenting with smoke consumers; and it seems every known device had been tried, except one. Photographs of dense smoke have also been effective exhibits in prosecutions for smoke nuisance.

R. C. Benner agrees that the deleterious effects of smoke from the burning of soft coal have not heretofore been very conclusively studied, though thousands, among them captains of industry, scientists and inventors, have been working upon the various and oftentimes perplexing phases of this problem. But Benner now gives the gratifying assurance that a "smoke house"—a laboratory so constructed that it is possible by varying the conditions, to get almost any kind of coal smoke for physical and chemical study—has been constructed in the Department of Industrial research of the University of Pittsburgh.

Smoke can be prevented with concomitant economy of fuel; and there are many

forms of furnaces which can be ideally operated to these ends. A serious difficulty seems to be in getting men sufficiently intelligent to operate these furnaces, the wage being small and the work not by any means A simple and "fool-proof" agreeable. mechanism is being devised (states Benner) that will automatically warn the stoker that the smoke his fire is making exceeds the law. Investigations are also in progress as to the amount of annoyance or suffering by reason of excessive smoke that is sustained in dwellings, hotels, hospitals, picture galleries, museums, office buildings, banks, libraries and stores; as to the detrimental effect of smoke upon the "city beautiful"; as to the meteorological aspects of the smoke problem; as to the effect of smoke upon plants, and above all upon human health.

While the relation of plants to smelter fumes and so forth has received much consideration, little has been given carbon, with the accompanying tar-containing phenol and other coal-tar compounds. Benner has found 44% tar in samples of soot. He wisely notes that such carbon smoke might have a very injurious effect upon vegetation, more especially in the Spring, when new leaves and tender shoots are the more readily affected by the toxic action of the soot and the conjoined substances. The all important relation of smoke to human health has probably thus far received very little definite study. Benner hopes that the laboratory will consider the as yet unsettled question whether inhaled soot predisposes to pulmonary tuberculosis. Pittsburgh is averred not to have as much consumption as other cities similarly located, where there is much less smoke and dirt: and there is more consumption in the better residence portions of Pittsburgh where there is less smoke and dirt than in the congested districts, where smoke (as also human misery) abounds. On the other hand "catarrh," pneumonia, and other bad air diseases are very prevalent, presumably by

reason of the irritation of the smoke particles. The ophthalmologists are busiest in Pittsburgh after a heavy fog accompanied by smoke. Benner hopes that these and many another phase of the smoke evil will be scientifically studied in this laboratory; and many physicians certainly, will be interested in the work and will no doubt find great satisfaction in the outcome.

There are all kinds of coal, from anthracite (which gives but little smoke) through bituminous (which gives out more) to lignite which emits a very dense smoke indeed. The use of a given sort of coal seems to be governed largely by the set custom of the given locality; but mostly by the supply of the coal and its cost. Anthracite is found mostly in the Eastern States, where it is least costly; wherefore the authorities of our seaboard cities have been comparatively more successful in suppressing the smoke nuisance. On the other hand, in such cities as Pittsburgh, Cleveland, Cincinnati and Chicago, manufacturers have declared the cost of anthracite prohibitive -that indeed, in any event there is not enough of this coal in existence to serve. So in those communities the use of bituminous and lignite preponderates; in Pittsburgh to the degree at least that washing one's face seems almost a work of supererogation.

A BAD BREAKING-OUT.

A STUDENT in a medical college was under examination. The instructor asked him, "Of what cause, specifically, did the people die who lost their lives at the destruction of Herculaneum and Pompeii?" "I think they died of an eruption, sir," answered the student.—Christian Advocate.

JOHNNY handed the following note from his mother to the teacher one morning:

"Dere Teecher,—You keep tellin my boy to breathe with his diafram. Maybe rich children have got diaframs, but how about when their father only makes two shillings a day and has got five children to keep? First it's one thing then it's another, and now it's diaframs. That's the worst yet."—
Tit-Bits.

It has been assumed that manufacturers have uppermost in their minds not the public health or convenience; but the means by which they can operate their plants at the least possible expense to them. That this is a somewhat gratuitous assumption is evidenced by the example of the Edison Company of Chicago, whose engineers have worked upon the problem with results entirely satisfactory to that municipality and with economy for itself. Burning some 2,000 tons of coal per day no smoke is said to be apparent from any one of the stacks of its central power house.

A difficulty would seem to lie in that most factories and like buildings were constructed before the formulation of scientific principles governing smoke prevention. These buildings have cost enormously; and proportionately costly must the change be if there is to be such smoke prevention as health authorities demand. In most factories coal is said to be burned in such manner that from 25% to 60% of its value (\$1 to \$3 a ton) is wasted. There is a distinction (which should be considered in any anti-smoke campaign), between smoke prevention and smoke consumption. As to the first, gases are burned in the fire box before they form smoke; and this process should be turned into account in reducing very materially the fuel bill. As to the second point, most devices have thus far been designed for smoke consumption—to catch and burn the smoke in the stack.

NIL DESPERANDUM.—A homely woman has at least eight chances of getting married. In the first place, she may inspire true love in a man whose faults are the opposite of hers; secondly, she may fall in love with a man of faultless proportions, and while in love her features will be so transfigured and beautified that he cannot help returning her love; thirdly, she may meet a man who, for want of æsthetic taste, prefers a chromo to a Titian; or a fourth, who would rather marry an amiable and useful homely girl than a spoiled beauty. Wealth and social position supply two more sources. Accident may favor, through the absence of prettier rivals, giving no opportunities for comparisons; and, finally, she may meet an elderly bachelor who has wearied of his single blessedness and longs for double life (or strife).

NUGGETS.

(From the novel, Over Bemerton's,* by E. V. Lucas.)

I WISH, by the way, that some one would call a flower after me. I should feel that indeed I had lived to some purpose could I, even from my death-bed, raise a weary head and, straining my poor, exhausted, failing auditories, catch the words, "How luxuriantly the Kent Falconers bloom this year!" Thus hearing, I could die in peace.

And the anemone. That is a totally new discovery. I saw for four pence bunches of anemones of a deep purple such as was never heard of in my time. And tulips are even more wonderful. We had tulips, of course, but they were the flaunting type. The new tulips can burn too, but also how sweet and grave they can be; and again, how cheery and courageous! But most of the new colors are wonderful. Sweet-peas we used to call merely sweet-peas and grow for scent; to-day the sweet-pea has a thousand names and colors, and every year, I am told, new and exquisite hues find expression in its butterfly bloom. The delphinium again is a magic revelation. I seem to remember something dingily like it—a larkspur we called it—but that this flower should ever adventure so gently up and down the scale of blue into the tenderest melodies-who could have expected that? The delphinium seems to me the perfect flower against or under a grey sky. It is not till the sun has left that it comes to its delicate own. I like to think of all the care and thought that the great florists have been spending during my thirty years' absence to evolve this lovely apparition against my return.

"Oh, Kent, Kent!" she cried, "when will you learn sense? You are all alike, you men. Your vanity has got to be satisfied. You must assume your own judgment of your own merits. When will you learn that women don't analyze and appraise; women love. That is enough for them—they love. You may want to know the why and wherefore of your feeling for her, and make catalogues of her merits and beauties, and apply the right adjective in order to find out and support your line of action and prove your good taste; but all the while you are doing that, the woman is loving. She doesn't love you because of anything—she loves. She doesn't care whether you are

•The Macmillan Company, New York.

handsome or ugly, or old or young, or cruel or kind, or strong or weak, or conceited or humble, whether you drop your h's, or have nothing in the bank—those things are beside the mark, because she loves."

"I don't agree with you," replied Grandmamma severely. "There is no trouble with
marriage. It is very distressing to me to
find this new attitude with regard to that
state. When I was a girl one neither talked
about incompatibility and temperament and
all the rest of it, nor talked about them. We
married. I have had to give up my library
subscription entirely because they send me
nothing nowadays but nauseous novels about
husbands and wives who cannot get on together."

My belief is that certain persons with soft hearts are doomed to ruin where they would assist. Most of the charitable are wreckers—certainly the check writers are, and certainly I am. I have proved it again and again."

Of course money is really the last instrument with which benevolence, charity, altruism, whatever you call it, works; but most of us put it first. The first really is thought.

I walked home rather thoughtfully by way of the Green Park and St. James' Park. It was a golden afternoon, and there were many lovers, and their happiness made me happy and made me sad. What would have been the result, I wondered, if steady happiness had been set on the throne of this world instead of uncertainty and change and disappointment? How would life have developed had one been born happy and well, and lived happily, and loved happily, and then, when our days were fulfilled, had suddenly died happily? Would it have harmed Have misfortune and disease the race? and frustration and insecurity been necessary to man's ingenuity and industry? Without sorrow should we have had no telegraph? Without tears no camera? Have

all the benefits of civilization been wrung from us in some effort to escape the blows of fate? And even if so, might not happiness, without the advantages of progress, have still been better?

(Of Possible Interest to Bachelors Past Forty.)

On lighting my lamp I had a shock; for in my chair was sitting a young man. Perfectly silent he sat, with an ease of manner, a quiet suggestion of possession, that I resented intensely. He wore a loose tweed suit, and held a pipe in his hand. I could not see his face. As he gave no sign of observing my entrance I coughed, and then asked if he were waiting for me, and what I could do for him. He replied that he was waiting for me, but that whether or not I could do anything for him remained to be seen. His voice sounded strangely familiar too, but still he did not move his head, which was a young head with plenty of brown hair not too orderly.

I had a feeling of fear. It seemed uncanny. I advanced nearer, wondering what to do next, when he got up lazily, stretched himself, yawned and looked around. I saw his face for the first time; and held to the table, or I should have fallen.

"Don't you know me?" he asked.

Knew him? Of course I did. It was myself. Not myself as I am to-day, but myself of twenty-one. I now remember the suit perfectly, too.

I continued to hold on to the table and I felt a little sick. I hate and dread the supernatural. But he soon put me at my ease, or thereabouts.

"How are you?" he said. "I can see it is about time I called. Let me look at your face. Yes," he said, after a long scrutiny, "Selfish. You think too much of your comfort. You don't believe in anything; there is a self-satisfied superior hardness in your eyes. You have not cried for years. You profess to feel sorry for people, but your philosophy is stronger than your pity. When did you last do an impulsive thing?

"Impulse," I said, "is largely a matter of inexperience. I have seen a deal of the world."

"Also," he said, "you're getting fat."

"No," I said, "not fat. That's merely the solidity of age. Remember, I'm getting on."

"Remember," he said bitterly. "How can I forget it? That is why I am here."

"What do you mean?" I asked him.

"Mean. My dear fellow, I have been watching you for years—ever since you dropped me, in fact, and I've longed to get a good straight talk with you; but I wasn't allowed. Nothing can happen till it's time."

"And why," I asked, trembling and chilling a little, "is it time to-night?" (But I

knew why.)

"I can't say," he replied, "but here I am. Let's see, how old exactly are you?"

"Fifty-five."

"Is it so long? How do you spend your time? What do you do?"

"Oh," I said, "I've retired. I read a good deal. I visit my friends. I walk about and talk to people. What should I do?"

"But tell me now," he continued, "don't you remember me at all. We were very happy, weren't we?"

"Fairly," I said.

"Have you gone back on everything? All those schemes over the red wine in Soho? We were to do such things. We were to be so keen for the best, and the best only. The best work and the best emotions. We were to help so frankly. We were to do so much to break down the bad barriers among men and women; and now, tell me, what have you to show for it all?"

I didn't feel very comfortable.

"What have you ever done for anyone?" How can one answer questions like that? I had not been so utterly unhelpful, I knew, but I could not begin a catalogue of my beneficences; it was too ridiculous.

"What have you done for anyone today?" he went on. I said nothing.

"Where did you dine to-night?" "To-night I dined at my club." "What did you do after?"

"I smoked a cigar, read the papers and skimmed a novel, and then came back."

"Did you speak to anyone?" "No one, except a waiter."

"What did you do all day?"

"I was at my tailor's in the morning; after lunch I went to Lord's.

"And you call that life, with all the world

at your feet?"
"Well, it passed the time. I have been busy enough in my day."

"Yes, in a Buenos Ayres counting-house. Did you make money?"

"I have enough." "Enough for what?" "For security; for my simple needs, and a little over."

"Your simple needs. Heavens, man, you make me furious. How dare you speak to me of your simple needs and your scrubby little club routine-me with the old abundant programme still on my lips. Can't you put yourself in my place for a single moment and think what it means to see every fine generous resolve gone wrong? How do you suppose it can strike me-yourself at twenty-one, remember-to see such a miscarriage of idealism as you. You, who began so well, and promised to rise so high above the petty ruck; you, who were famous for your fearlessness as a critic of conventions and shams. And now, how do I find you?—an old, timid selfish clubman, poring over the papers in a cold sweat for fear of losing any of the dirty little dividends that give you the hogwash you call comfort and security! To think that I should ever hear you use such a word. It was not in your dictionary in my day."

"Oh, yes," he hurried on. "I know you're a gentleman, and all that; but that's what's wrong. You weren't going to be a sterile gentleman; you were going to be a real man; you were going to help put things right. And now what do I find you doing?"

He paused for a moment. Then he continued his catechism. "Why didn't you come home now and then from Buenos Ayres?"

"I couldn't; there was no one else to take my place."

"Why didn't you give it up then?"

"One does not throw things up."

"No, one does not. One clings to one's little pettifogging habits, and one's mean little salary, even in a foreign land, whilst all that is most real and beautiful and best worth doing is beckoning one away. Prudence dictates the course, expediency controls. And so you turned your back on England and your home for over thirty years. Friends and relations died; it was nothing to you."

"It was everything to me."

"And yet you didn't come home. You went on languidly and happily driving some one else's quill in that state of apathetic indolence which denationalization seems to carry with it, and quietly allowed all that was best in life to slip away from you. I know, because I was there."

"Then why didn't you stop me," I cried.

"Ah, I have touched you," he said, "you have admitted all. I did not stop you be cause these are the things one has to do without help. I am here to-night not on your account in the least, you have passed beyond my interest, but on account of some one else. Why aren't you married?" he said swiftly. I began to see what was coming.

"Why?" he repeated. "Have you never loved?"

"Not sufficiently, I suppose."

"Don't you love anyone now?"

"How dare you."

"I am here to dare; remember, I've never grown up; daring is natural enough to me. I don't ask for security. Do you love anyone now?"

I said nothing.

"You love Naomi," he said.

I said nothing.

"You love her," he repeated, "and—God knows why—she loves you."

"Say that again," I said.

"She loves you."

"How do you know?"

"I know."

I felt horribly giddy again.

"Now listen," he said, and his voice had become kinder. "This is your last chance. Be a man, give us this amiable idling and do something decisive. Marry her; she's the best woman you'll ever meet, and she'll make you work. Marry her, old chap, ask her to-morrow and begin to live again. You've been dead too long."

"Does she really love me?" I asked him; but he had disappeared.

When I woke up I found I was still in my clothes on the sitting-room floor. I crept to bed in a daze.

BOOK NOTICES.

MEDICAL AND SANITARY INSPECTION OF SCHOOLS, for the Health Officer, the Physician, the Nurse and the Teacher, by S. H. Neumayer, A. B., M. D., 71 Engravings and 14 Full-page Plates, Lea and Febiger, Philadelphia and New York.

It has become a truism that the welfare and the prosperity of any nation must depend upon the health and the stamina of its people; and such health and stamina are in turn conditioned upon the well-being of the nation's school children. Nor can it be doubted that the right period and place in which to detect, at least rectifiable abnormalities and degeneracies in the coming citizen are in childhood and methodically, in the schools.

Such examinations are logically the functions of government. Some of our readers may not agree to this proposition, as savoring of impertinent officialism. Well, when a generation ago it was sought to make school attendance compulsory, there were many who opposed legal enactment to this end as tending to paternalism in government. And as being an outrageous infringement upon personal liberty and the rights of parents. But who to-day would be found to oppose compulsory school attendance?

Clearly something more than has been done in the past is necessary to be done for the health of our school children. Consider a conservative estimate: Of 1,400 New York City children 12 per cent. were found to be suffering from malnutrition; 48 per cent. from enlarged glands; 74 per cent. from bad teeth; 14 per cent. from eye defects; 27 per cent. from nasal defects; 29 per cent. from throat ailments. From such data one must conclude that in the metropolis, at the time of the computation, 48,000 children were suffering from malnutrition; 187,000 from enlarged glands; 230,800 from defective breathing, and so on. One must infer that should those percentages obtain for the rest of the country—as why should they not-twelve million of our school children must be suffering from physical ailments.

Unquestionably then, Dr. Neumayer's fine and comprehensive treatise is a timely work, which should be in the hands of all those to whom it is addressed. PRACTICAL SANITATION—A HANDBOOK FOR HEALTH OFFICERS AND PRACTITIONERS OF MEDICINE, by Fletcher Gardner, M. D., and James P. Simonds, B. A., M. D. Illustrated. St. Louis. C. V. Mosby Co., 1914. \$4.00. In this excellent book, which deals with the most important field in medicine to-day, especial emphasis is laid on quarantine, the grouping of quarantinable diseases, medical school inspection, the duties of health officers, the management of campaigns for the extermination of rats, vermin and insects that may be disease carriers.

DIAGNOSTIC METHODS, by Herbert T. Brooks, A. B., M. D., Second Edition, Revised and Rewritten. St. Louis, C. V. Mosby Co., 1914. \$1.00. Here is an indispensable guide for history taking, the making of routine physical examinations and the usual laboratory tests necessary for students in clinical pathology, hospital internes and practicing physicians. A particularly valuable feature is its outlining of case history taking.

Exercises for Women, by Florence Bolton, A. B., formerly Director Women's Gymnasium, Stanford University. Cloth, 12mo. Illustrated. Price, \$1.00 net; by mail, \$1.10. Funk & Wagnalls Company; New York, publishers. This book will amply inform those women who feel the need of some definite, simple and suitable course of exercise that may be done in the home, without apparatus if necessary. Its illustrations are very descriptive of the exercises. It should be decidedly useful to doctors who would instruct their patients, to teachers of gymnastics, and it should be conducive to physical grace and power in women.

HYGIENE AND PUBLIC HEALTH, by Louis C. Parkes, M. D., D. P. H. (Univ. of Lowell), and Henry Kenwood, M. B., F. R. S. (Edin.), D. P. H. (Lond.). Fifth Edition, with 95 Illustrations. Phila. P. Blakeston's Son & Co., 1913. \$3.50. In this fifth edition of a most admirable and cyclopedic work, new matter has been introduced and Dr. Elizabeth Frazer has furnished the material for a superb chapter on immunity.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M. D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A RETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

THE CURATIVE PROPERTIES OF A KIND HEART.

How easy it is for one benevolent being to diffuse pleasure around him; and how truly is a kind heart a fountain of gladness, making everything in its vicinity to freshen into smiles.—Washington Irving.

THIS is a bit of "new thought" for our special consideration as companions of the sick. It is no newer than Irving, or the gospels, or the prophets, or, for that matter, Adam and Eve. The only thing new about "new thought" is that it would be a new thing for some people to get it.

Can we remember that our patients are sick, or think they are; that they have revealed to us, perhaps unwillingly, the inner

secrets of their weakness and sorrow and that we are the custodians of their secrets; that they look to us for strength and encouragement as well as for medicine and baths? If we can remember these things we shall realize the human element in every "case" and we will make it our privilege to radiate human sympathy as we go about the day's work. And so the work will be the pleasanter for us and our friends, the patients, will make better progress toward recovery. This is what some smart people have just found out—and call it new. It never gets old.

TRAINING NURSES IN THE UNIVERSITY.

CERTAIN enthusiasts have ventured to predict the time when all our trained nurses will be university made. They seem to see a multiplication of the courses of study open to nurses until every university—and we suppose every college—will be engaged in the good work and every nurse will be obliged to take the course just as doctors must now take a medical course, before receiving her license to practise.

With the possibility of such a state of affairs somewhere in the future, it is interesting to know what one university is doing to provide a complete course of nurse training. We quote from an article by Professor Richard Olding Beard, in the Journal of the American Medical Association:

The University of Minnesota is the pioneer of this significant movement for the better education of nursing-women. In creating a school for nurses as a department of teaching, under direct university control, in charge of the faculty of the medical school and affiliated with the teaching hospital, which is similarly owned and controlled by the university, it has led the entier world, although it has been happily followed, already by two neighboring state universities. The

significance of this movement lies not alone in the high standard o ftraining which the university has set, but in the fact that its action tends to remove from the exclusive? control of the hospital, as such, the education of the nurse. Its significance can be measured only by those who have studied the problem of the education of nursing-women from the point of view of the student's educational interest shall be paraexploited for the benefit of the hospital service sounds the note of an emancipation which could not be effected, perhaps, by any other agency.

The essential features of the university curriculum for nurses may be of some interest. The diploma of a high school of the first grade and an actual examination to determine the physical fitness of the candidate, conducted by the physician of the school, are requirements for admission. Preference is given to women of superior attainments. A preliminary course of four months is required, during which the pupil is not in hospital residence, for which course she pays a tuition fee, and which covers instruction from six to eight hours daily, conducted in the laboratories and lecture-halls of the university, in the subjects of anatomy, physiology, bacteriology, chemistry, materia medica, English, penmanship and lettering, physical culture, hospital economics and practical dietetics

—a course with which the student is exclusively occupied during the four months, thus relieving the period of subsequent hospital service of many wearying hours of evening lectures. The superior fitness of the hospital entratn for her practical duties by virtue of her preliminary course of study, has proved itself clearly to those who are in immediate charge of the school. A two-months' probation service in hospital, followed by two and one-half years of graded service and study in the wards complete the course. An eight-hour hospital day and the employment of an adequate number of graduate nurses as long as may prove necessary for the proper conduct of the school

are added features of the university plan. On recommendation of the medical faculty the university degree of Graduate in Nursing is conferred by the Board of Regents.

When one considers the haphazard way in which many "leading physicians" impart instruction to the training school classes in their charge—the appointments poorly kept or skipped, and the altogether unpedagogical, unmethodical makeshifts by which they attempt to teach—the plan of this western university looks indeed sumptuous. It is nurse training de luxe.

OBJECTIONS TO THE DORSAL POSITION AFTER CHILDBIRTH.

NEARLY all midwives and many doctors insist in keeping a woman on her back for the first week or so after bearing a child; probably not one in ten of these wardens could tell, if asked, why this special form of torture is essential to the traditional conduct of the puerperium.

Dr. W. C. Gayler, of the University of St. Louis, presents a very reasonable argument in the Journal of the American Medical Association to show that the dorsal position during the puerperium is a most efficient cause of retroversion of the womb. He reminds us that the uterus after delivery is not only large and heavy but more freely movable than at any other time of the woman's life. The ligaments are too lax to support the uterus in its proper place, and the bladder is subject to over-distension which is another potent factor in crowding the uterus backward into a false position, particularly if the woman is lying on her The dorsal position, for these reasons, would seem to be the very worst possible position for the woman, because it favors retroversion of the womb as no other position could.

"The involution of the uterus, ligaments, vagina, vulva and perineum is a physiologic act, and should therefore leave no defect or malposition behind it." Obviously, then, it is the duty of the doctor and the nurse to help nature—to give these relaxed and weakened organs a physiologic chance to regain their normal condition. We can learn a lesson from the brute world, as the doctor clearly shows us in his conclusion:

If we assert that a return to the four-footed manner of life would remove posterior uterine displacements, we state an interesting fact that cannot possibly be demonstrated. If we ask, however, that woman remain off her back during her puerperium, thus taking a lesson of the lower animals, we ask something that is possible of fulfilment. To spend most of her time on her right and left sides, occasionally to be flat on her abdomen, or to assume a position slightly on her side but almost on her abdomen, would seem a logical procedure for at least eight days. Bumm says that the uterus loses half its weight in the first eight days following delivery. The involution of the round ligaments is probably well advanced by that time.

I certainly think that the dorsal position should be prohibited during the puerperium, unless there seems to be an interference with the flow of the lochial discharge while the woman is in other positions.

POISONING BY VAGINAL DOUCHES OF MERCURIC CHLORID.

AGAIN we are warned of the extreme foolishness of the douche habit when the patient's faith relies on the healing virtues of "bichlorid." Dr. Fenwick Beekman, of New York, reports a case, who fortunately recovered from the effects of her misguided zeal, but not until she had consulted the doctor for chronic "Bright's." We condense

the doctor's story as told in the Journal of the American Medical Association:

For six months this woman, aged 22, had been using vaginal douches of mercuric chlorid in solution of 1:1,000 to 1:2,000, at the rate of four or five times a week. When she consulted the doctor she had generalized dropsy, especially marked in the legs, with

albumin and casts in the urine. She had no suspicion that her trouble was due to the douches until informed by the doctor. She was cured in five months.

An interesting feature of this case is the fact that there were no signs of mercurial poisoning in or around the vagina, and that

the poison was absorbed from normal, healthy vaginal surfaces. The doctor adds:

The conclusion, therefore, is that the indiscriminate use of corrosive sublimate as a vaginal douche may be dangerous at any time and this danger is increased if there be any condition present which would tend to increase retention and absorption of the drug.

PAUPER HELP FOR THE SICK.

When Dr. Craddock became medical officer of the Workhouse at Bath, England, thirty-one years ago, the 230 patients were in charge of a "nursing staff" consisting of an old woman with heart disease and an untrained girl, assisted by "pauper helps." The doctor considered himself fortunate when he secured two trained nurses to attend to this work. As late as 1894—only 20 years ago—the hospital conditions were far from ideal, as shown by the report quoted in the *Hospital*:

"There was no hot water laid on in any of the wards—every drop had to be carried from a boiler across a court; and at night none was procurable except by boiling a kettle. Most of the wards were dark and squalid, and without any cross-ventilation. Dr. Craddock had managed to effect some slight improvement in the nursing staff, but fon over 200 sick inmates, some sixty of whom were confined to bed, only one fully-trained nurse, assisted by two partly-trained women and a girl of seventeen, was available during the day. At night the patients were left entirely in the charge of paupers—two on the male side and one on

the female. Dr. Fuller states in his report: 'As a natural sequence, at night, poulticing, when required, the care and cleanliness of the helpless and bedridden, and the administration of food and medicines to acute cases in stated quantities at stated times, are entirely neglected.' There were three roller towels, changed three times a week, for the use of each ward of about twenty-three beds; there was one comb 'somewhere about' for the patients, and 'perhaps a brush.' The bedding was chaff or flock, and the mattresses too thin to cushion the laths of the bedsteads. The medicines were left on the window-sills, and were administered by pauper inmates. In face of all these facts, a committee appointed by the Bath Guardians in June, 1894, shortly before Dr. Fuller's inquiry, to investigate the complaints made by Dr. Craddock, reported: 'We cannot recommend that any addition be made to the present nursing staff of the infirmary.' They supported their conclusion by an argument dear to Guardians even to-day, that other infirmaries were in a worse plight still. Fortunately, Dr. Craddock was not the man to accept the Guardians' decision as final, and his triumph came a few months later, with Dr. Fuller's report, which initiated reforms which have continued until to-day."

THE WORK OF THE SOCIAL SERVICE NURSE IN CONNECTION WITH THE DISPENSARY.

Hospitals and dispensaries are constantly discovering new possibilities in the visiting nurse, and the time has arrived when no large institution in this class is complete without its "Social Service Department" in which nurses perform the major part of the expert work.

Five years ago the late Dr. Musser, of Philadelphia made a careful study of this line of work as it was conducted by the Massachusetts General Hospital in Boston. He was so thoroughly convinced of the value of this innovation that he organized a social service department as an adjunct to the medical institutions of the University of Pennsylvania. The results of this extension work have been wonderful; physicians have been able to follow up their dispensary cases and to carry out lines of treatment that were simply impossible under former conditions—all because of the coöperation of intelligent nurses and social workers whose business is to extend the influence and authority of the dispensary into the home.

How this good work is accomplished in

the case of the Children's Dispensary is well told by Dr. Maurice Ostheimer, physician in charge of the Children's Dispensary, University Hospital, Philadelphia, whose article appears in the Journal of the American Medical Association. In one paragraph he gives the reason why the dispensary, working in the old rut, frequently failed to accomplish the desired results. He then describes the present methods of work, giving many details which will prove invaluable to all nurses whatever their "line" may be.

Advice and directions, although carefully explained to the person who accompanies the young patient to the dispensary, are frequently received with scant attention and sometimes partially or even totally forgotten by the time the child has reached home. Even detailed directions, minutely written out, may never come into the hands of the child's parents. And finally, even if the note does reach the parents, the physician's advice and directions may nevertheless remain unheeded.

It was primarily with the object of having our directions correctly carried out that the social service department two years ago began to work with the children's dispensary. It was soon found, however, what a wide field of usefulness was opened to the visiting nurse and through her not only to the physicians at work in the dispensary but also to the philanthropic men and women supplying the funds to carry on the work.

WORK OF THE NURSE.

When a sick child is observed in the dispensary, explicit directions are given to the trained nurse the same afternoon, sometimes while the child is present, sometimes later. If the nurse is in the room when advice is given, the child will recognize her when she visits the home, as she does within twenty-four hours. The same written orders which have been explained to the child's mother are also given to the nurse. On her arrival at the child's home,

she explains the physician's directions fully and with great detail and shows the mother how to carry out each separate order. She sees that the sick child is correctly cared for; instructs the mother in preparing the food properly and in giving water to drink at regular intervals; in the matter of bathing or sponging; in correct bedding, covering and clothing; in nursing, cleanliness, hygiene and sanitation. She shows which windows and doors should remain open; when to leave the child alone for sleep; how to dispose of the excreta; how to keep other persons out of the sick-roomin short, how to make the conditions as nearly ideal as is possible under existing circumstances. If she finds the surroundings absolutely impossible, she reports the conditions to the physician, or in urgent cases makes arrangements for the child's immediate removal to the hospital.

She also learns the financial conditions of the entire family; the sanitary conditions of the whole house; the number of families living in the house; the cleanliness of furniture and bedding; the presence of unnoticed or untreated illness, defects or deformities among other members of the family or, in a tenement house, of the neighbors' families; whether work is done on the premises and, if done, what kind of work; and what sort of work is performed by the various members of the family. She tries to refer these people to the different departments of the hospital for whatever treatment she thinks necessary, as, for example, to the nose and throat dispensary for adenoids, to the nervous dispensary for electricity and massage, or to the laboratory for tuberculin or Wassermann tests; she sees that children return to the children's dispensary from time to time; sends other children for examination or treatment; secures hospital care for those too ill to visit the dispensary; sends some to the seashore, to special sanatoriums or to open-air schools; gets out-door jobs for convalescents and other employment for others; gives careful instructions to those about to become mothers, and refers the needy and undecided to the chief of our social service department, Miss Helen Glenn, for her counsel. It is a pleasure for me to acknowledge here our great indebtedness to Miss Glenn and her assistants.

In cases in which there is possibility of an acute infectious disease, and in any case of gonorrhea, syphilis or tuberculosis, the nurse arranges for the isolation of the patient and instructs adult members of the family as to the means and manner of preventing further contagion in that household. If isolation is impossible, she persuades the family to allow the child to be removed to the special hospital for the treatment of contagious diseases. In case of extreme poverty, or when there is insufficient food or clothing, she tries to find nicans to ameliorate existing conditions. The patient is usually taken to the hospital, and some charitable organization is asked to investigate and relieve the family. When the nurse suspects that children may have been or are being abused, she directs the attention of the Society to Protect Children from Cruelty to the family. She may also arrange for the free dispensation of medicine to members of such families, on the physician's request.

The nurse may also be instructed to leave printed "diet" and "don't" lists in homes in which there are children; to wash out a stomach or to irrigate the intestines; to give special baths, sponging, oil rubs or massage; and to give minute instructions for the preparation and administration of food and medicine. She may also be able to secure specimens of sputum, urine and feces for examination, if the physician desires. She tries to impress on pregnant women the importance of care before and after delivery, and urges mothers to keep their infants with them; she also tries to correct certain bad family habits, such as the lack of toothbrushes: the common custom of leaving food uncovered, exposed to dust and flies; a family, including one or

more sick children, congregating about the kitchen range in cold weather with doors and windows all tightly shut; or the prevalent habit of children rushing off to school without having had any breakfast or after hastily swallowing some fresh cinnamon bun or roll, with a drink of tea or coffee.

Should there be no older person to accompany the child to the dispensary, the social worker tries to find some one to bring the patient to the doctor regularly. If a child should suddenly grow worse, she arranges to rush both mother and baby to the hospital; and if the person who accompanies a child should chance to become ill or to faint while in the hospital. some one is provided to see that they both reach home safely. The remarks of the visiting nurse have been the means of stopping, in many homes, not only the use of patent medicines but also the old custom of "baby pacifiers." Many children with defects of speech, spinal curvature, backwardness, adenoids, otitis or enuresis. which so many parents consider incurable, have been brought for treatment and improved if not cured. Besides, places as domestics have been found for mothers. with or without their children. It would not be difficult to refer to many instances of what appeared to be trifling matters in which the existing problem was solved with the aid of the social service department, eventually making an entire family again independent.

In the feeding of infants and children much has been accomplished. The nurse, who continues her visits even after the child seems well, can encourage breast-feeding until warm weather is over; can keep away all other foods; can teach the habit of feeding at regular intervals; can arrange for a wet-nurse if the physician wishes; or can teach the proper preparation of the baby's food under the doctor's orders. She can oversee weaning when the time arrives, and the general care and feeding of the older children, preventing

the common indulgence in sweets, fresh cake and bread, especially between meals; and the overindulgence in tea, coffee and fried foods of all kinds.

Our best results were achieved in the acute gastro-intestinal attacks of infants in the summer. Here the elimination of the cause, which is always the food, saves the baby. No matter how carefully, how urgently or how decidedly the physician tries to impress on the baby's mother the importance of this fact, a friend, a neighbor or frequently the baby's grandmother persists in feeding the baby. But when a nurse comes into the household daily, prepares the boiled water or lactose solution and makes the mother understand, often through an interpreter, that any food may kill her baby, we get results. Three of our case histories follow, one from each of the summer months:

CASE I.—Baby C., 18 months old, of Italian parentage, the only child (one of twins, the other having died nine months before) was brought to the dispensary, June 28, with a history of vomiting and diarrhœa for three days. She had been partaking of all the food that her parents Her temperature was 103.2 F. All food was stopped and only lime-water and cinnamon-water and 5 per cent. lactose solution were allowed, beginning with onehalf ounce at a time, iced. The nurse, who was present in the dispensary, visited the family the same afternoon and showed the mother how to prepare the solution. The next day, as vomiting had ceased, the quantity of lactose solution was gradually increased; the day after that whole milk was added and this was readily increased until the mixture was one-half milk. Five days after the nurse's first visit the baby was well, on undiluted milk. mother has been very grateful, bringing the child back for every trifling ailment.

CASE 2.—Baby V., 6 months old, ninth child of Italian parents, was brought to the dispensary, July 14. He had been weaned almost two months earlier and was

taking 5 ounces of mixture of milk and water (2½ ounces of each) every three He had been vomiting and his hours. bowels had been loose and stools green for three days; though he had refused his bottle his mother kept urging food on him. His temperature was 104.4 F. As the mother refused to allow him to remain, even for a day, in the hospital, he was given castor oil and sent home. The nurse visited him that same afternoon, showed the mother how to sponge him and to prepare the lactose solution. Two days later he was put to both breasts every three hours for five minutes, followed by the lactose solution. This was continued, a little milk being added to the lactose solu-In six days he was back on the breast solely and was doing well. In this family some of the other children were brought to the hospital for treatment and diagnosis, and others were sent to the seashore.

CASE 3.—Baby D., the fifth child of Russian parents, with a tuberculous mother and sister, was brought to the dispensary first in July with indigestion because of being nursed too often and being allowed to take too much at each nursing. When 3 months of age, in August, he was brought back, ill with diarrhea and vomiting, and a temperature of 101.4 F. On being taken from the breast, given a dose of castor oil and put on lactose solution, he fully recovered in twenty-four hours. In this family no single member has been without some benefit from the work of our social service department.

During the summer of last year, for the first time in ten years, I did not have to sign one death certificate in the dispensary and, so far as I can discover, only two of our patients were admitted to any hospital in a moribund condition. We were unable to observe a single case of cholera infantum and the only really ill infants were found among the foreigners, the Russians and Italians. From this it is evident that, while our former campaigns in the educa-

tion of mothers in preventive medicine have benefited those who could talk and understand English, we have not yet been able to reach the foreign population. While the nurse did good work in preparing the feedings, she also explained to those women the ordinary rules of hygiene, both before and after delivery, fresh air, bathing, water to drink, clothing, covering, and the myriad trifling details of which so many mothers are woefully ignorant. Her other great work was in urging mothers not to part with their children.

It is, then, no idle boast for me to terminate with the statement that, with the assistance of our social service department, the children's dispensary has been able to save many lives (especially among infants of foreign parentage), much contagion, illness, worry and even expense. It is my hope that the possibility of usefulness in this field may deeply impress you. Far as our work has gone the field of usefulness to humanity seems still wider. There can be no doubt that contributions will never fail to be forthcoming to support work of such a philanthropic character.

A CASE OF EGGSAGGERATED EGGO.

An ancient Roman epicure once remarked that he would have oysters even if he had to grow them on the roof of his house. Our modern lovers of pure food and good living may be glad to take a hint from the slow city of Philadelphia and convert their roof gardens into henneries so that they can enjoy the luscious egg before it has lost its bloom. The Times of the aforesaid city tells a most astonishing story of high altitude eggs, which is as follows, if the *Inter*national Hospital Record has made no errors in transcribing it:

"Aerial poultry farming in a glass-enclosed roof top during midwinter in the center of the uptown district has proved a successful innovation at the Northwestern General Hospital, where a record of four and one-half minutes has been established from the signal cackle of a Rhode Island Red to the serving of her

egg upon toast at the bedside of the patient.
"The sky-line hen yard had its beginning recently, when absolutely fresh eggs were essential as lifesavers for one of the sufferers. A small, uncompleted sun parlor occupied one end of the hospital room, where the sun on the coldest days produced a Palm Beach temperature as it poured through the thick

pines.
"It was here that the ingenuity of physicians and the Rhode Island Red's ability to

cians and the Rhode Island Red's ability to accustom herself to altitude and anxiety to prove she wasn't responsible for the high price of eggs, formed the nucleus for the unique and unparalleled little farm.

"Physicians at the hospital say that the ability to send still warm eggs to the diet kitchen and then to patients with lightning-like rapidity, has played an important part in the wonderful cures being performed there.

"The original little red hen, which was formally christened 'Queen of the Diet Kitchen,' has been augmented by five other feathered

has been augmented by five other feathered

matrons, all striving for altitude laying records. The hens were all sent from the Kurtz farm at Lancaster and took readily to their sun parlor home.

"Roosts, nests and every modern conveni-ence have been provided and they are cared for even down to manicuring and grain and oyster shell dieting by Harry Doyle, orderly and chicken (feathered) expert.

"Doyle asserts that he can hear the cackle, which heralds the arrival of an egg, even when engaged in one of the wards, and, if shown proper encouragement, he will solemnly avow that he can tell which hen gave him the wireless call for quick action.
"So expert has Doyle become in his roof

egg hunting trips that he is on his way downward with the eggs before the 'Queen of the Diet Kitchen' or her feathered sisters have finished clucking.

"Ranking next to the actual egg producers in importance in the 'hen-to-toast system' is the rosy-cheeked and white-capped nurse in charge of the diet kitchen.

"The nurse as a culinary expert, according to the latest medical rules, is considered one of the best, and when the egg reaches her in the rapid transit she proves to be a feminine

"There are several bewildering movements
"There are several bewildering movements the flash of an of her white-cuffed wrists, the flash of an antiseptic egg poacher, the click of a sterilized spoon, a puff of blue flame, and the next instant a raised circle of gold surrounded by milky whiteness has been flicked with wondrous cunning to its pedestal of warm, brown

"Another pretty nurse holds a heated plate and just as the stop watch ticks the final of the four minutes and thirty seconds, the wonderful poultry creation is at the bedside of the patient with the much-abused liver in private room No. 5 or helping little Nora Coffey in the same ward who is being drawn out of the clutches of death by the wonder-working surgeons.

"Incidentally the egg is delivered with a smile such as nurses of the Northwestern General are noted for, and the No. 5 patient lays great credit upon that fact, as a quieter for his liver, and little Nora forgets for an instant her suffering, and smiles in return.

"The surgeon says that he has experienced very little difficulty in keeping the hens in laying form. The house is carefully ventilated and kept in such spic and span condition that Doyle has pleaded for miniature

"A near-tragedy was recently averted when a feathered matron attempted to digest a rusty ten-penny nail, which had found its way into the section reserved for

the dust bath.

"The hen gasped a weak S. O. S. and was about to be ready for the slow procession when Doyle dashed into the accident ward,

and Dr. J. K. Marks, the resident physician, operated upon the craw successfully. According to Doyle, the Leghorn has since doubled the regular union hours for laying as a mark of gratitude."

With all deference to Madam Hen, for whom we have the greatest respect, we must confess that her conduct betrays a streak of eggotism which is disappointing in so useful a bird. We like modest, quiet hens. When any hen, in Philadelphia or any other henvironment, gets the notion that she is so essential that the world can't go on without her two eggs a day, we fear that she is suffering from an eggsaggerated idea of her Better have her eggsown importance. amined by an alienist.

THE GREEK NURSE.

WRITING in the Interstate Medical Journal, Dr. Achilles Rose, of New York, pays high tribute to the women of Greece for their interest in education and culture. In speaking of the work accomplished by the women's educational society he has this to say about nurses and their progress in Greece:

Among the objects of the society from its start has been that of elevating the status of women nurses to one of dignity, which previously had not been accorded to them. Nursing the sick as an occupation was practiced by women of the humblest classes, and they were not considered higher than washerwomen; there existed at that time among the ordinary people no idea that nursing the sick was a noble vocation worthy of well-educated, welltrained women.

In the year 1875 Queen Olga requested Dr. Nicolas G. Makkas to write a textbook for the instruction of nurses. In the following year the Queen appointed a committee of distinguished men to collect money for the erection of a new hospital to equal the best mod-ern hospitals of Europe. This hospital was opened in the year 1884 and was called Evangelismos.

It is to a great extent due to the warm interest and the personal devotion of Queen Olga that the contributions to this hospital from the beginning came in so richly and contin-ued to flow all the time, but the truth is that there exists no place on earth, no city in the world, which is, in proportion to its size, so generous as Athens in the matter of philan-

In speaking of the site, the Evangelismos is the most wholesome, most beautifully situated hospital that can be imagined. It stands on high ground, with a magnificent view on a scene dominated by picturesque mountains and a scenery which is dear to everyone who is familiar with ancient Greek history. There is a current of air from the mountains of the north, modified sometimes by sea breezes,

which were highly appreciated by the ancients. It is on account of this fresh mountain air that the Americans and the English have se-lected the places for their archaeological schools in the neighborhood of the Evangelismos. It is well known that on account of the purity of the air in Greece, especially in Athens, septic diseases are of rare occurrence and of little danger. Erysipelas, for instance, is considered a harmless affection.

As has been mentioned already, it was Queen Olga, now the Queen-widow, who inspired and still inspires the work, but unlike instances of this kind in which patronage by a high personage means principally receiving reports, contributing means, we have here an example of devotion without equal. The interest which the Queen takes in the welfare of the hospital is admirable indeed. While in Athens she takes personal notice of the most minute details, visits the hospital daily, goes to the bedside, consoles the suffering. And through the daily press we know how inde-fatigable she and the princesses of the royal family have worked for the wounded during the last war.

Visiting the different hospitals of Patras and Athens, there was one thing which surprised me especially—the high standard of education and refinement of the nurses in general. It is true there were many German, Danish and Americans among them, but as a rule they spoke, besides Greek and their mother tongues, several languages; all the native Greek nurses, as far as I experienced, spoke German and told me that they had

learned it in school.

The details enumerated here tell of the nobility of Greek women of all classes, and it may truly be said that there is no nation by which women are higher respected than by the Greek. This fact alone argues a great future for the Greeks. Ever since I began to try to enlighten the medical profession on the true character of the Greek people, I predicted that the greatness of Greece will not only remain to be a thing of the past, of the glorious classical period, but it will be also in a glorious future.

THE FUNCTION OF SEX EDUCATION.

BY HELEN M. SMITH, NEW YORK CITY.

THE necessity for giving instruction to young people on the function of reproduction has become widely recognized, but there is still a good deal of confusion in the minds of many as to the best time and method and place for such instruction. The problem would be greatly simplified if those who are trying to solve it would get a few facts fixed firmly in their minds. After all, the difficulty lies more in the minds of the grown people than in those of the children.

In the first place, reproduction is a perfectly normal function; just as natural a part of life as eating or sleeping or exercising. This is the natural attitude of the child whose mind has not been perverted. If the child's questions about reproduction are answered in the same spirit as all his other questions, his reaction is not different from his reaction to any other subject. To the child, this subject is no more wonderful or strange or peculiar than many of the interesting things he is learning every day. A child who is taught naturally will accept it as such. It is grown people who have surrounded the subject of reproduction with an air of mystery or shame and set it apart as a thing not to be mentioned. The difference in the attitude toward the subject between the adult and the child is illustrated in the experience of one mother whose little girl of ten had asked several times where babies come from. Each time the mother had put her off, dreading the ordeal of telling. Finally, after reading and thinking over the subject, she called the child and told her she could ask any questions she wished. The little girl asked only a few; then she said, "May I make candy this afternoon?" Her curiosity, not having been perverted, was easily satisfied and the object of it soon forgotten. People who try to keep their children innocent, as they call it, not letting them know anything about reproduction until they have grown up, are confounding innocence with ignorance, and have a wrong and distorted view of the whole subject in their own minds.

But even if it were desirable, it is almost impossible to keep children ignorant. Childhood has a normal healthy curiosity about everything. If this curiosity is thwarted on any subject, that subject takes on a new interest, and information in regard to it is sought from any source where

it may be obtained. So that, instead of learning the pure and normal story of reproduction from his parents, whereby he might keep his innocence, the child gets a disjointed, distorted and often perverted version from his companions or some evilminded older person, so that he loses his innocence, but keeps his ignorance. It is a fact little appreciated by older people, yet nevertheless true, that when children are left to find out for themselves the facts of reproduction, it is always the abnormal and the unfortunate side which they learn about, so that they get an entirely wrong viewpoint of the whole subject. The very best way to prevent morbid curiosity is to satisfy normal curiosity. A physician who is keenly interested in the instruction of children in reproduction said that the trouble with his own children was that he could not make them feel any interest in the subject. He had taught them the function of sex along with other things from early childhood, and now that they knew about it, the subject has lost interest.

Except in a very few cases, it is not possible to keep children entirely ignorant of the function of sex even if it were desirable, but it is most undesirable. There is a psychological reason for this. Up to the age of puberty, all normal children have what might be called an objective way of looking at things; that is, the interest is in the thing itself, with very little concern of the relation that it may bear to their own lives. This is what makes the delightful lack of self-consciousness in childhood. particularly noticeable in its bearing upon the subject of sex. To the child whose mind has not already been perverted, this subject is just as natural and no more strange than any other subject about which he is getting information, and causes no more feeling of self-consciousness or embarrassment than any other. A little boy of nine was showing some visitors about his father's place and explaining various things of interest. He told how the snapdragons were fertilized by the bees and when the bee got inside the flower, the petals would close together on it so they could catch it. The gladioli, he said, were fertilized by the humming-birds. Then he showed some pigeons shut up in cages. When asked why they were kept shut up, he said that his brother had put them there

to mate; when they were through mating they would be allowed to fly with the other pigeons. This child was learning the facts of reproduction in a perfectly natural way and fitting them quite unconsciously into their normal place in life.

During the period of adolescence great changes, both physical and psychic, take place. The child grows abnormally selfconscious. His attitude toward life becomes subjective. Whereas to the child the function of reproduction was impersonal, to the adolescent boy or girl, it is intensely personal. Every fact is applied in its relation to himself. If the child has already learned the process of reproduction in a wholesome manner, so that it has taken its normal place in life, and if he feels free to go to one or the other of his parents when new thoughts or feelings arise, he will very likely pass through this period without undue agitation. If, on the other hand, the child has received his first information in an unfortunate way from other children, the new subjective application of these facts may lead to disastrous results. We hear alarming statements from time to time of the immorality of boys and girls who are scarcely more than children, and of the seduction of very young girls by older men. It is my opinion that the majority of these cases could be traced to a prurient curiosity which has become strongly subjective; a curiosity so strong as to overcome any natural modesty. children who would not go so far as to do what they know to be wrong, nevertheless talk a great deal about the subject among themselves in both a morbid and prurient

If the young person learns about the function of sex for the first time after the period of childhood is passed, the information is received subjectively and comes as a shock to the sensibilities. Young people of sensitive nature who have had no adequate instruction in childhood, often suffer intensely during their youth because of their inability to make an adjustment of the facts of sex to the rest of life. Many look upon the subject with feelings of shame and fear; sometimes growing so morbid over it as to cause a state of ill health. A physician who has had the confidence of a great many young people, once said that the mental distress in youth caused by a lack of understanding of the subject of sex was far more widespread and of much more serious consequence than most people had any idea of.

A girl of eighteen came to me one day greatly troubled. She said life seemed so dreadful. I asked what the matter was and she replied with the question: "What is all this about passion, does everyone have to have it?" I said, "Tell me what you have heard." She replied that when she was quite a small child she had been told everything by another child in such a dreadful way that she was ashamed of her own father and mother. Lately she had heard other things. Some one said "Men had to be bad." Another one said, "If they were bad they got a terrible disease." The only thing her mother told her was of the shame of being an unmarried mother. She and her friends had been trying to understand the meaning of it all. They had talked and thought of it so much that they had grown morbid. I invited the girl to come to my house and bring her friends. In a series of talks, I told them the whole wonderful story of reproduction, from the plants through the animals to the human beings, explaining fully everything on the normal side and answering all questions. A few months later this young girl wrote to me saying, "I never think about that subject at all any more, I don't have to. I understand all about it and now it has just sunk down to the bottom of my mind." A thorough and right understanding of the pure and normal side of the function of sex is the very best and safest way to prevent morbid or prurient thought and conversation.

We have seen that sex is a perfectly normal function and should be looked upon as such, that even if desirable, it is not possible to keep children ignorant, but that it is not desirable, because during the objective period of childhood is the time in which the facts are received most naturally and given their normal place in life. The question still remains, who shall tell the story. Ideally, it is not only the parent's duty, but also his privilege, to tell his own Practically, many parents are still unfitted for the task. Some have too low ideals, others are manifestly too ignorant, still others are either unwilling or indifferent, while many who are fitted in every other way have lost the confidence of their children and do not know how to broach the subject.

The question has arisen frequently of the expediency of giving this instruction in the public schools. It is my belief that it should not be undertaken without the greatest care, and only under two conditions: First, that

a teacher can be secured who not only understands her subject, but who looks upon it with reverence, and who has high ideals of life; one who loves and understands children and who knows how to win their interest and affection. Second, there must be the co-operation of the parents, at least in the beginning. I think it a mistake to teach children the story of life when the parents do not wish it done. It is possible often to meet their objections and win their co-operation. Perhaps the best way is to call a parents' meeting and have the lecturer tell why it is so necessary to teach children in a pure and reverent way, then she might explain how she is going to take the subject up. Finally, all parents who wish their children to join such a class should sign a paper to that effect. Even if the first class is small, more parents will wish to take advantage of the opportunity later, if the experiment proves successful. Another advantage of this method is that it gives an opportunity for the child to tell what he has learned to his parent, and thus re-establish the confidence which is so often lacking. The teacher should always instruct the children to tell their parents what she has told them, at the same time explaining to them that the subject is sacred and for that reason should not be discussed

with other children. If the teacher has been successful in winning the confidence and the liking of her pupils, a request not to discuss it with other children, for the reason given, will usually be sufficient to prevent the talk so often feared; particularly if an opportunity is given to ask her any questions that may be on their minds.

As to the method of teaching, one thing is most important. The function of sex is a very vital part of life, and when the subject is taught it should not be cut off from life and given as so many scientific facts, but it should be related to life as a whole. Sex has two sides; the physical side and the ethical side. These cannot be separated without disaster. The physical must be interpreted in the light of the ethical. Mere scientific knowledge, no matter how clearly understood, has no effect upon conduct. Such knowledge is necessary as a foundation on which to build, but after all, the important thing to be understood is the ethical interpretation of these facts. Howard Griggs has said "It is always dangerous to know the facts of life without appreciating their spiritual corollaries." This is nowhere so true as it is in those facts which have to do with the great function of reproduction.

NURSING NERVOUS PATIENTS.*

By MILDRED LUCIE SPACKMAN.

THE nurse who is most successful with nervous patients is she who possesses a nervous imaginative temperament, well under control. She must be extremely tactful, sympathetic and adaptable. Mr. Stephen Paget suggests that a doctor is much improved, from his patients' point of view, if he has to undergo a severe operation, or has a serious illness, at the beginning of his medical career; this (though it sounds unkind) is perhaps also true of the nurse. She would understand—to her patient's benefit—the minor worries of invalidism and remember that an invalid's point of view is often out of perspective. The nurse must always keep her mind open to fresh impressions, remember that no two people are alike, and that no two patients can be treated exactly in the same way. Above

all, she must take care of her own health, and never let her thoughts dwell on the patient when away from her.

It is unfortunate that there is a widespread idea that sympathy is bad for nerve patients, and that they do not deserve it. Nothing could be more erroneous. "Sympathy" is not synonymous with "pity," neither is it sympathetic to tell a patient how ill she looks, or otherwise encourage her sensations of ill-health. Sympathy, in the true sense of the word, will enable the nurse to comprehend the patient's feelings, win her confidence, and thus be able to help her. It is always possible that a patient's nerves are upset by a secret trouble, though she may pretend some other cause. Nervous patients are usually over-sensitive, and the nurse should be very careful to avoid snappiness, however "trying" the patient may be. The patient probably finds her equally

^{*}Reprinted from The British Journal of Nursing.

"trying," and is suffering more. A patient who has been snapped at may refrain from expressing any emotion (which does not imply that she is not affected by it) for the remainder of her illness, and will certainly never confide in her nurse, or respect her. Too much self-control is sometimes as bad as too little.

Nervous terror of the most ordinary incidents is a frequent symptom in nerve cases, especially after a long illness or bad attack of influenza. Many patients—often the worst cases—do not talk of these feelings, through pride, or fear of being thought silly, or even insane. If the nurse suspects the existence of these feelings, it is perhaps kinder for her apparently to ignore them. She can help the patient without alluding to it. She might speak casually of a "case she once had" where the patient suffered from nervous terrors, and who forgot them as she recovered. And if the patient is "nervous" of speaking to people the nurse could-momentarily-take the lead in the conversation when a visitor comes in and gradually efface herself. In time the patient will rely on her, and cease to be conscious of her nervousness. With any form of nervous terrors, if the patient has confidence in and reliance on her nurse, it will be easier for her to regain her normal condition than if she had not that confidence and reliance. This is especially the case if the patient is inclined to give way, or does not recognize the sensations as abnormal, and know what is normal.

Some patients implore the nurse not to leave them alone with the doctor; others prefer the nurse to be absent during the medical interview. The patient's wish should always be studied in this matter, and if she expresses none the nurse should leave patient and doctor together, without appearing to have made a point of doing so.

Nervous patients require more rest than others, and the nurse must see that it is undisturbed. She must not go into the sickroom after the patient is made comfortable

for the night, unless for an important reason. The very fact of expecting the visit would keep many people awake, and if the patient had fallen asleep, there is always the risk of waking her, and thus causing a bad night. Some patients wake up at one or two in the morning, and find it impossible to sleep again. A glass of hot milk often remedies this, and it could be put in a vacuum flask on the bedside table the night before, so that the patient can help herself at whatever hour she awakes. Rest during the day is equally essential. A patient who feels wretched and unstrung is generally much better after an hour or two's absolute quiet with an interesting novel, or, if tired as well, a long sleep. Nervous patients should cultivate the art of lying quietly and restfully when unable to sleep.

Many patients dislike being asked how they are and how they have slept immediately the nurse enters the room in the morning. Great tact is often required in asking any questions at all, and if the patient can be induced to give the nurse all necessary information without being asked, so much the better.

The patient's diet will be prescribed by the doctor, but the nurse should see that it is daintily served, and as varied as possible. The appetite is even more capricious than is usual with an invalid, and a very slight thing may cause the patient to enjoy, or refuse, a meal. All food should be light, nourishing and extremely digestible.

Fresh air—if only through an open window—sunlight and cheerfulness, are all necessary to the patient's recovery. People who are dull, or pay lengthy visits, or are exceedingly emotional, should be excluded from the sick-room.

Some colorings in wall papers are more soothing than others; green and blue are the best shades. Unfortunately it is rarely in the nurse's power to choose.

An over-crowded room is never restful, and it is always possible to remedy this matter.

Quack Medicine Vendor—"Here you are, gents, sixpence a bottle. Founded on the researches of modern science. Where should we be without science? Look at the hancient Britons. They hadn't got no science, and where are they? Dead and buried, every one of 'em."—Punch.

I have loved the feel of the grass under my feet; and the sound of running streams by my side. The hum of the wind in the treetops has always been good music to me, and the face of fields has often comforted me more than the faces of men.—John Burroughs.—Atlantic Monthly.

CHARITABLE HOSPITALS NOT LIABLE FOR NEGLIGENCE OF NURSES.

THE Supreme Court of Nebraska says that it is a well-established doctrine that a charitable institution conducting a hospital solely for philanthropic and benevolent purposes is not liable to inmates for the neglegence of nurses. Some courts say that one accepting the benefits of such a charity exempts his benefactor from liability for the negligent acts of servants. Others assert that non-liability is based on the ground that trust funds created for benevolent purposes should not be diverted therefrom to pay damages arising from the torts of servants. Exemption from liability is frequently sanctioned on the ground that public policy encourages the support and maintenance of charitable institutions and protects their funds from the maw of litigation. While there is a diversity of opinion as to the reasons for the rule, the doctrine itself is firmly established.

Nor does a charitable institution conducting a hospital by accepting compensation from a patient who is able to pay for room, board and care incur liability to such patient for the negligence of nurses. Money accepted from patients who are able to pay it does not go to persons who may be trustees, directors, founders, or incorporators of the institution, and is not a source of pecuniary gain to private individuals, but is devoted to the general purposes of the charity.

Consequently a charitable institution conducting a hospital for benevolent purposes alone does not necessarily incur liability in damages for the death of an insane patient who committed suicide when alone in a room, though pay for the patient's room and care was accepted under an oral agreement to keep a nurse in constant attendance.

—Journal of the American Medical Association.

Questions and Answers.

The following answers are not "official." They are prepared for the editor.

University of the State of New York, 20th Nurses' Examination.

BACTERIOLOGY AND SURGERY.

Thursday, June 26, 1913—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. Define (a) culture, (b) culture media. Ans. (a) The artificial propagation of any organism or the result of such propagation. (b) Substances used for the artificial cultivation of bacteria.

2. What would you use as a stopper to insure the sterility of the contents of a bottle or a test tube?

Ans. Sterile cotton.

3. What are ptomaines?

Ans. Alkaloidal or basic products of putrefaction.

4. Name (a) two diseases due to bacteria in the air, (b) two diseases due to bacteria in water and soil, (c) two diseases due to bacteria in food.

Ans. (a) Tuberculosis, influenza; (b) cholera, tetanus; (c) typhoid, diphtheria.

5. State the air space of a room that 16 ounces of 40 per cent. formaldehyde and 63/4 ounces of potassium permanganate will effectually fumigate.

Ans. One thousand cubic feet.

6. After a room has been fumigated as suggested in question 5, what can be done to destroy the fumes if the room is needed soon?

Ans. Evaporate ammonia water in the room.

7. How can you tell when a plaster bandage is sufficiently soaked?

Ans. Air bubbles cease to rise from it.

8. What is the simplest way of making a sling?

Ans. Fold a handkerchief diagonally.

9. Name two common gynecological positions.

Ans. Dorsal, Sims.

10. What is the approximate temperature of steam under a pressure of 15 pounds to the square inch?

Ans. 212 degrees Fahrenheit.

11. What determines the real value of a disinfectant?

Ans. Its property of killing all species of bacteria and their spores.

12. If you had less than 12 hours in which to prepare a carpeted room for a surgical operation, what would you do about taking up the carpet? Why?

Ans. Leave it in place and cover it well. Because it would be dangerous to stir up dust in the room and attempt to sterilize the room in less than 12 hours.

13. How should new nail brushes be

first treated?

Ans. Wash thoroughly in soap suds, dry

quickly, and sterilize.

14. How long should you scrub your hands with soap and water when about to assist at a surgical operation?

Ans. Five to ten minutes.

15. What solutions are most commonly used for irrigating the bladder?

Ans. Normal salt solution, saturated solution boric acid.

VERMONT BOARD OF REGISTRATION OF NURSES.

ANATOMY AND PHYSIOLOGY.

Examination at Montpelier, Vt., May 8th, 1913.

1. Name the three great cavities of the body.

Ans. Abdominal, thoracic and cerebrospinal.

2. How many bones in the lower extremity?

Ans. Thirty.

3. Why do bones of the aged break more easily than those of the young?

Ans. Because they are less spongy and elastic.

4. Name the divisions of the small intestine. What is the pylorus?

Ans. Duodenum, jejunum and ileum. The distal opening, or outlet of the stomach, leading to the duodenum.

5. What is the function and capacity of

the gall bladder?

Ans. To store up bile. Eight to twelve drachms.

6. Where does the femoral artery begin? Ans. At Poupart's ligament.

7. How do arteries and veins differ in structure?

Ans. Arteries have thicker walls than veins, and a larger proportion of muscle and elastic tissue. Veins have valves.

8. Name four particulars in which expired air differs from the air inspired.

Ans. 1. It is warmer, usually. 2. It contains more moisture. 3. It contains more carbon dioxid. 4. It contains less oxygen.

9. What is the shortest possible course blood can take in passing from one side of the heart to the other?

Ans. Through the coronary arteries, capillaries and veins.

10. What is the size of red blood corpuscles? Of white blood corpuscles?

Ans. Red corpuscles, 7 to 7½ microns in diameter; white corpuscles, 5 to 10 microns in diameter.

11. Of what elements are fats composed? Ans. Hydrogen and carbon.

12. When is a limb flexed? Extended? Abducted? Adducted? Rotated?

Ans. Flexed when it is bent; extended when straightened; abducted when drawn away from median line; adducted when drawn toward median line; rotated when turned around itself without other change in its relation to body.

MEDICAL NURSING AND HYGIENE.

1. State (a) the cause, (b) the symptoms of bed sores. (c) How prevented? (d) Give treatment in full.

2. What is (a) the normal temperature of the body in health? (b) What are the limits of temperature in health? (c) Where



may temperature be taken? (d) How does it differ in these locations?

- 3. Name the sequelae and complications of scarlet fever.
- 4. How do typhoid bacilli enter the system? (a) By what mediums are they conveyed? (b) What precautions must a nurse adopt to protect herself and others in nursing typhoid?

5. Give some of the "danger signals" in pneumonia crisis. (a) What treatment

should be given at the time?

- 6. Define (a) communicable (b) contagious (c) infectious disease. Give example of each.
 - 7. Under what conditions are nutritive

- enemas ordered? (a) How are they given? (b) How often? (c) Give a formula for
- 8. Give nursing treatment in detail for sudden collapse of patient.
- 9. Describe appearance of blood in hemorrhage from lungs. (a) Define nurse's duties in such an emergency.

10. Give all the essentials of an ideal or

hygienic sickroom.

11. What are the duties of a nurse when caring for a case of tuberculosis?

12. What is (a) empyema? (b) Of what disease is it a sequel? (c) Give treatment.

13. How can you determine if the air of a sickroom is fresh?

MATERIA MEDICA AND URINALYSIS.

- 1. What are the names of weights used in the apothecaries' table?
- 2. Define (a) expectorant, (b) digestant, (c) rubefacient, (d) diuretic, (e) emetic, (f) cathartic.
- 3. Give dose of croton oil. (a) How best administered?
- 4. Give (a) ordinary name of oleum tiglii, (b) oleum terebinthinae, (c) oleum ricini.
- 5. If nitroglycerine gr. 1/200 hypodermically was ordered and you only had tablets gr. 1/100, how would you proceed?
- 6. Name two emetics easily procured in any household.
- 7. What is indicated by the order, "Give hydragyri chlor mite, grs. #, t.i.d."? (a) What should be avoided in diet after?

- 8. What precautions should be taken in administering iron preparations? (a) Name some of the iron preparations used as medi-
- 9. Give usual hypodermic dose of strychnia. (a) Name two alkaloids of opium in common use and hypodermic dose of each.
- 10. How would you treat a case of poisoning by carbolic acid?
- 11. Give test for (a) acid, (b) alkaline urine. (c) Give a test for albumen in urine.
- 12. What is specific gravity of normal urine? (a) Give amount secreted in twenty-four hours.

Have your answers to these questions ready for comparison with the answers to be given in a later number of the GAZETTE.

WHAT SHOULD A NURSE NOT DO?

SHE should not undertake a new case when she is dead tired.

Not stay for years in private nursing without attending new lectures or courses of training.

Not cease to study after passing her exminations.

Not forget to become a subscriber to a nursing paper.

Not consider the purchase of new books of study unnecessary.

Never lose an opportunity of visiting a hospital.—From the Dutch Nosokomos.

A TERRIBLE STORY.

It is reported from St. Petersburg that a young peasant woman after her confinement in one of the local hospitals in Irbit fell into a state of coma, which the nurse in charge of the maternity section took for death. The "body" and that of the stillborn child were taken to the mortuary chamber of the hospital and the door as usual was locked for the night. morning the woman was found dead of sold, huddled against an empty stove, with her baby in her arms. She had wrapped up the baby in her sole garment, a nightgown.—British Journal of Nursing.

TECHNICALITIES.

ITEMS of value to nurses in their work will be welcome to this column.

STERILIZATION OF SCALPELS.—Whilst it is generally recognized that the sterilization of metal instruments can be more reliably effected by boiling them than by the use of antiseptics, and accordingly most instruments are submitted to this process, a notable exception is made of cutting instruments such as scalpels, which of all instruments ought to be perfectly sterile. The objection to boiling these arises from the fear of impairing the keenness of the blades, and consequently many surgeons content themselves with the method of sterilization by antiseptics. It is quite true that knives can be damaged in the course of boiling, both mechanically and through the softening of the steel, but it does not necessarily follow that they need be, if proper precautions be taken. Mechanical damage resulting from the contact of the knives with each other in the course of boiling can easily be avoided by placing them in a special rack in the The more serious impairment of softening, caused by the subjection of the knives to the temperature of boiling water for prolonged periods, can be prevented by chilling them immediately upon their removal from the sterilizer, by plunging them into cold alcohol, for it is the gradual cooling which destroys the temper of the steel.

BAD AIR AND PNEUMONIA.—The minute people begin to shut themselves up within doors, that minute the pneumonia germs get busy. Open windows and pure air drive pneumonia germs to cover; closed windows and foul air bestir them to activity.—Bulletin Chicago Board of Health.

GIVE CHILDREN FRESH AIR.—Infants and children who are kept indoors in cool and cold weather, and breathe the air of overheated and stuffy living apartments, will not digest well no matter what they feed on.
—DR. AUGUST CAILLE, in Jour. Mich. State Med. Soc.

How TYPHOID IS ACQUIRED.—Tell your people that typhoid fever can only be transmitted by eating or drinking the typhoid bacilli present in the excrement of a typhoid patient, that it is not due to bad drains, swamps, stagnant pools or bad food, but that it is spread by flies, water, milk, typhoid carriers and patients.—Bulletin Indiana State Board of Health.

THE SMALL ECONOMIES.—In filling a syringe for a hypodermic injection, the well-instructed nurse presses out the air until a drop of the solution appears at the end of the needle. If instead a few drops of the solution are squirted out each time a hypodermic of cocaine or some other costly drug is given, that waste means a loss, to a hospital of one hundred and fifty or two hundred patients, of about a hundred dollars a year.

The substitution of the many-tail bandage for the roller bandage is another economy. When the patient came into the operating room swathed in several layers of the roller bandage, the surgeon would save precious time by cutting it off. It was therefore waste material. The many-tail bandage, as its picturesque name implies, is easily applied, quickly removed, and, through sterilization, leads a long and useful life.—Buffalo General Hospital Bulletin.

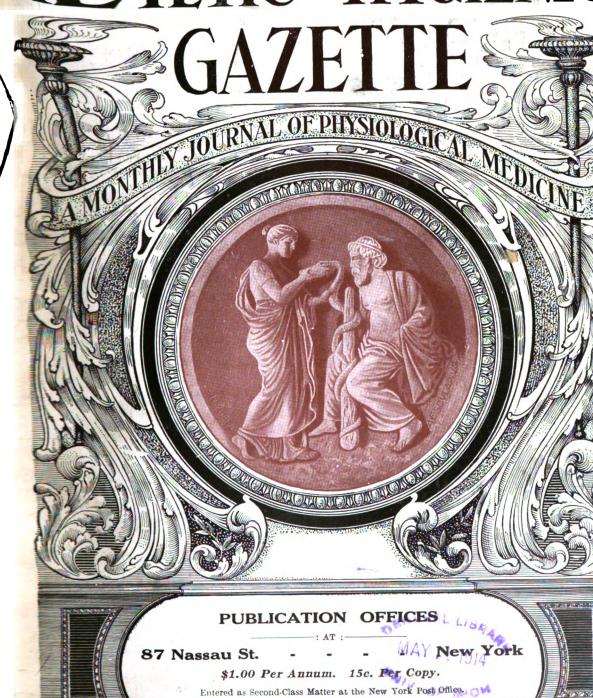
Preparing Catgut.—In the Journal-Lancet, published at Minneapolis, Dr. H. W. Barbour describes his method of preparing catgut. By his method the raw catgut is cut in 18-inch lengths. Each length is wound on a glass tube three-fourths inch in length. Get tubing that is used as watergauges in steam boilers, and have them cut up in proper lengths. The gut is so wound on this tubing that the first turns fasten each end of the ligature to prevent unwrapping. The winding should be done smoothly, not allowing one turn to overlap the other. It is next placed in a solution composed of 1 part of tincture iodin in 15 parts of 90 per cent alcohol, where it remains for ten days. At the end of ten days it is placed in a 2-per cent watery solution of formaldehyde for twenty-four hours to render it somewhat harder, after which it is stored in 90-per-cent alcohol to which ½-grain of mercuric chlorid has been added for every ounce of alcohol. If desired it may be rinsed in sterile water before use. Barbour has soaked coils of catgut in a bouillon culture of anthrax, placed them in iodin solution and made cultures daily, and has found the gut sterile after the seventh day. He has not been able to detect any change in the catgut after it has been stored for six months. It has given good satisfaction in general surgical work and for skin sutures. —Internat. Hosp. Record.

(ars a

lage

THE

OF TETICAND HYGIENIC



Digitized by Google

The best antiseptic for purposes of persunal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teeth.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts

water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY

LOCUST AND TWENTY-FIRST STREETS :: ST. LOUIS, MO.

VACINAL ANTISEPSIS IS COMPLETELY SECURED THROUGH THE EMPLOYMENT OF

ASEPTIKONS

(FORMERLY KNOWN AS CHINOSOL COMP. VAGINAL SUPPOSITORIES)

These su positories are indicated in cervicitis, leucorrhea, specific and nonpecific vulvo-vaginitis and in all cases where complete vaginal antisepsis is desired.

NON TOXIC, NON IRRITATING, NO DAMAGE TO MEMBRANES.
YET A MORE POWERFUL ANTISEPTIC THAN BICHLORIDE

Chinosol—Tablets and Powder Full Literature on Request Chinosol Co.

PARMELE PHARMACAL CO-SELLING AGT, 54 SOUTH ST., N. Y.

Digitized by Google

THE

DIETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A.M., M.D.

Vol. XXX.

MAY. 1914. No. V

EDITORIALS.

A KING AMONG MEN.

DR. Prince A. Morrow was well surnamed, and yet not well enough.-For he was assuredly a king among men. Saullike, he towered above all others; bearded, keen-eyed, his personality was most imposing. Richly-minded, his physicianship was of the highest; his works were through many years and are now known wherever medical science obtains. His great hearted zeal for his race's betterment was untiring; his soul was indeed noble beyond the comprehension of many. He was deemed a prosperous man. Let those who speak of "medical grafter" judge how much of material wealth his altruism and his sympathies brought him; he left an estate of \$9,354 to his widow and their children. His superb work "Social Disease and Marriage" brought him royalties for six months of \$13.80. As President and founder of the American Society of Sanitary and Moral Prophylaxis he was made, by oral agreement only, trustee of a fund of ten thous-

and dollars; which fund, by the terms of his will, was surrendered.

This inherent gentle-man made the sins which bring so much woe on human kind the special work of his medical life. An incident typical of his character occurred with relation to an address he made in McCoy Hall, Johns Hopkins At the same time there University. was a convention of woman's clubs in Baltimore; and many of those women went rather unexpectedly to hear him. The physician who was about to present him had previously read his paper and had advised him to modify and to omit some of the statements it contained.

Dr. Morrow invited his presentor to note that on both sides of McCoy Hall there were several exits, besides the usual ones at the back of the hall; and that any one he might offend could almost instantly get beyond the sound of his voice. No woman left, and many afterward came up to thank him for his courageous "revelations."

TWILIGHT.

The day lived out its life in splendid peace content,

The placid, rounded hours in sunny state were spent;

And must this radiant presence grow less bright?

Almost too fair and lofty seemed this day of glow,

Until-a hush, a low sob filled with love and woe-

The day, its soul astir, had met the night. -Louise Townsend Nicholl.

SAVE THE BOY.

We gladly comply with the request of the Rev. Manfred P. Welcher to inform our readers that the Anti-Cigarette League of America will hold a conference on the coming June 2d, 3d and 4th, in The Lake Mohonk Mountain House, New York, and we beg those interested to write Mr. Welcher for information concerning these meetings either at 310 Clermont Avenue, Brooklyn, New York, or at the general headquarters of the League, 1119 Woman's Temple, Chicago, Illinois.

The work to which this League is devoted is indeed vital. The use of tobacco by the adult is not here considered; but we do often have some observations on the use of tobacco by the immature.

More than a decade ago Dr. I. N. Love declared: "The numerous mental wrecks, youths who have come under my care during the last ten years, whose lives were failures, or who fill suicides' graves, impress me that to-day tobacco stands as the gravest danger confronting the new century; and the medical profession has a fearful responsibility in educating young men and their parents to appreciate this danger." Here is a statement as true to-day as when it was written.

Among the baneful effects of nicotine (or the pyridine compounds into which it is converted) are those upon the nervous system, as evidenced by vertigo, tremor, giddiness, leg weariness, pains in various nervecentres; amnesia, aphasia, psychic aberration, due to spinal or cerebral irritation; and especially such vaso-motor paralyses as cold extremities, pallor, clammy hands and excessive sweating. Burton has found that at first nicotine powerfully increases the bloodpressure and slows the heart; the arterioles are contracted, partly because the vasomotor centres in the medulla are stimulated, and partly because of the local action upon the arterioles themselves. This slowing is presently followed by the rapid pulse in consequence of the paralysis of the heart ganglia. In both frogs and mammals tobacco produces first convulsions and then paralysis. The symptoms referable to the cardio-vascular system are palpitation, irregular and rapid pulse, precordial pain, oftentimes sharp and severe, and very like angina. The myocardium may become impaired by constant contraction of the coronaries; this and the rise of blood-pressure may lead to arteriosclerosis; a true angina may develop, as also a fatty heart.

Digestion is often impaired; much saliva is, perhaps subconsciously, swallowed by smokers who do not spit, and by chewers of tobacco this occasions nausea, vomiting, flatulence and gastralgia, especially in the neo-It is likely also that the gastric secretions are thus diminished, hyperchlorhydria induced, and muscular tone in the digestive tract impaired. "A peculiar susceptibility to the influence of tobacco is shown when a lesion arises in previously healthy epithelium; and this may even induce a cancer at an especially early age; susceptibility to such a malignant growth may play an important part when a chancre, or some sore caused by biting the tongue or cheek, or by the irritation of a tooth, is aggravated by to-Tobacco may affect the nose and throat, either by irritation (especially when the stronger forms are used), or indirectly from dyspepsia or other constitutional disturbances; it should not, however, be blamed entirely for the "relaxed" or "gouty" throat, in the production of which alcohol oftentimes plays a part. Tobacco may, moreover, unfairly be held accountable for a catarrh dependent upon some such well-defined lesion as a suppuration in an accessory sinus. And yet tobacco will often enough aggravate such a lesion, as it will also a pre-existent inflammation of the whole respiratory tract. Asthma is not rare among smokers; the respirations are quickened and deepened, so that dyspnœa is the result. Smoking in an unventilated room is much more injurious than in the open; and non-smokers might as well indulge if they must breathe an atmosphere laden with tobacco fumes. When the

smoke is inhaled much nicotine is absorbed by the sensitive pulmonary surfaces, and thus must be explained the prostration which so often follows upon this practice. Our colleagues who work upon the nose and throat have found that no treatment will avail so long as the patient will persist in the use of tobacco. The "weed" produces, by local irritation, a catarrhal conjunctivitis; or the nicotine, when slowly and continually absorbed from the alimentary tract, may induce amblyopia, either acute or chronic. The acute form has resulted even from the application of tobacco to a hollow tooth; and in a patient who took snuff during ten days to cure a cold. The chronic form occurs in heavy smokers of strong tobacco; dyspepsia, bad feeding, poverty, overwork, worry and insomnia predispose by lowering the nervous resistance to such toxic influences. If amblyopia is to be treated, tobacco must, of course, be entirely withheld; the results are better in the young than in men over fifty. Among other evils ascribed to the misuse of tobacco is impotence. Those who work in tobacco suffer greatly from anæmia, respiratory diseases and digestive disturbances. As we are here concerned mainly with the immature it seems relevant to consider the experiments of Vas upon puppies. By means of this substance he induced anæmia; the hæmoglobin and the red blood corpuscles decreased over one-half; the solid residue and the alkalinity of the blood decreased a little, whilst the leucocytes were decidedly augmented. The use of tobacco has been observed to induce a diminution of the therapeutic effects of medicines, and to retard the healing of wounds. Unquestionably tobacco predisposes to pulmonary tuberculosis, and when diseases of respiration have developed the tobacco habit certainly aggravates them.

The most injurious form of smoking is the cigarette, largely because the fumes are inhaled, and also because of the temptation to smoke many cigarettes; next comes the pipe; the least injurious is the cigar. To-bacco used in chewing and snuffing contains very little nicotine, wherefore poisoning by these means is comparatively rare. Other things being equal, the more excessive the indulgence, the more the smoke is inhaled, and the younger the patient, the more likely are ill effects to be manifested.

Tobacco has its analogue among perhaps every people or tribe that has ever been visited by civilized man. It is one of the "paratriptics," the savings banks of the tissues, which seem to retard tissue waste; such also are the Calabar bean, coca, arsenic, strychnine, cinchona, gentian, Indian hemp, coffee, tea, alcohol. The best reason for saying that these things are beneficent when judiciously used is that the demand for them is imperative and not to be denied—their worldwide prevalence demonstrates that. They are used to tide an exhausted or a misused organism over physical crises. To the beginner in their use the most of them are unpalatable, or even poisonous; and it is not likely they would be taken to any degree were it not that the moderate use of them has, on the whole, been found salutary, or at least necessary. As a paratriptic, tobacco has established itself immovably in the regard of a very large contingent of the race. In the East they say of it that to some there can be no greater blessing; to others no greater curse. We are here, however, as before observed, not concerned with the adult; we but enounce the general principle that the use of tobacco should be debarred the child, the growing lad and the youth (women also—decidedly). For them it is unquestionably deleterious and poisonous; and their bodies, which are fresh and rich in reserve forces, need no stimulant, this or any other. One must surely conclude that a substance which can, when persisted in, so profoundly affect the youthful organism in the ways here indicated, is likely to work destructive and permanent changes in the tissues.

Lady Visitor—"Cheer up, my good man. You know, 'stone walls do not a prison make.'"

"No, indeed, lady. It takes dirt and disease, foul air, rotten food, flogging and torture, thieving officers, and graft higher up—nowadays."—Life.

It does not now become a man of science to doubt the possibility of anything.

—Lord Kelvin.

"The man of science has learned to believe not by faith, but by verification."

—Huxley.

THE GREATER HEALTHFULNESS OF RURAL DISTRICTS.

THE sanitary advantages of country districts over cities are impressively set forth by Dr. Frederick L. Hoffman, the statistician of the Prudential Life Insurance Company. It would seem that in the North Atlantic States, upon which Hoffman bases his observations the only causes of death commoner in the rural districts are typhoid, malaria, influenza, dysentery, apoplexy, paralysis, disease of the heart and peritonitis. Some of these are terminal affections; and regarding them the difference results from a larger proportion of old people among the country population. The most serious difference is the higher mortality from influenza, "which is partly due to needless exposure." Dysentery in the country is perhaps due to neglect; but the mortality difference here is negligible. On the other hand, the diseases more rife in the cities are cancer, alcoholism, meningitis, bronchitis, broncho-pneumonia, lobar and unqualified pneumonia, diarrhœa and enteritis, cirrhosis of the liver, appendicitis, Bright's disease and nephritis, and deaths from violence. Hoffman concludes that in the registration area of the United States (which excludes, however, most of the rural sections of the Western and Southern States) the mortality rate from all causes combined, and from practically all the important causes, is much less in the rural districts than in the cities.

The superior longevity and lower disease liability of the agricultural class is convincingly set forth in the report (quoted by Hoffman) of the Registrar-General for England and Wales. The death rates are not only below the standard for all occupied and retired males; they are also generally below the rates among all males in the

selected healthful districts (except among farmers and their laborers above sixty-five years). Within the main working period of life the comparative mortality figures for the agricultural class is 40 per cent below the average for occupied and retired males; and the mortality from alcoholism and liver diseases, from phthisis and respiratory diseases, is less than one-half, and from Bright's disease about one-half the standard. From all other causes except influenza from which the mortality is normal) the death rates are also below the average.

Of course it were a work of supererogation to seek to deter those, however unfit, who are bent upon abandoning their country homes for the stress and turmoil and tragedy of city life, those so oftentimes doomed thus to failure in their ambitions, to starvation and suffering in hideously insanitary tenements and to pathetically untimely deaths; there is scarcely an argument that has ever appealed to those thus determined to prefer the madding crowd to the ineffable peace and wholesomeness of the country, its natural living, and its wholesome sunshine and air, its fields and placid waters. Many go cityward because they dread the monotony of country life. But country life has vastly changed within a generation, indeed within a decade past. "There are hundreds of charming villages from Maine to California which can offer laborers and small farmers almost as many pleasures and social advantages as the large cities can." telephone, the various self-playing musical instruments, the village libraries, the cheap (and good) magazines, the clubs, the state and county fairs, the mail order system, the rural free delivery and the like have left no one any excuse to complain of monotony in the country. And as to those "social advantages"; are there any superior in the city? Well, hardly!

Even yet a June-bug gives me a thrill, and the grip of his horny legs on my finger will set my associative memory working as will few things else. For me he is a living question, a puzzle, a hard little lump of primeval nature. Above all, he

is a scarab. Around his foolish head lingers a glory visible only to the mind's eye, but made up of vestiges of Karnak and Thebes, of Isis and Orus and the dog Anubis.—Robert M. Gay, The Atlantic Monthly.

ANNOUNCEMENT.

THE LEISURE HOUR is omitted from this issue by reason of the unusual space devoted to RURAL SANITATION. With the June number our Leisure Hour Department will be "reshumed," as Private Mulvaney would say. In our June number Hot Weather Hygiene will be "featured."

We have arranged to print the superb series of popular lectures delivered the season now passing by the physicians of the Lebanon Hospital in the Bronx, New York, under the auspices of the Social Service Department of that institution. The first of these papers by that master-surgeon, Dr. Parker Syms, will appear in our June issue. And papers by Dr. William S. Gottheil, Dr. Percy Fridenberg, Dr. Ralph Waldo, Dr. Charles Herrmann and others will follow in due course. The coming fall the whole notable series will be handsomely reprinted together.

ALPHONSE BERTILLON.

ALPHONSE BERTILLON who did most to elaborate the science of anthropometry, from which he evolved in 1879 a system of criminal identification died February 13th last. By his work the records of municipal police departments were improved far beyond those of their courts. The police of great cities regularly discharge exchange the Bertillon measurements of convicted men; and can thus recognize of national and oftentimes of international disrepute. Bertillon was himself for thirty years the head of the Paris Bureau of Identification.

This remarkable man has been considered the inventor of the finger print method of identification; but erroneously. When Mr. Wm. A. Pinkerton was in China he found that the merchants impress their thumbs rather than write their signatures on documents and business agreements and have ever with them for this purpose a cake of ink. And this it seems, has been the case for centuries, from time immemorial, indeed. From China the use of the thumb print spread to India, whence the English introduced it to London. Francis Galton published his Finger Prints in 1892 and soon after his Index of Finger Prints. He computed that the chance of a finger print of an individual being duplicated by that of another is one in sixty-five billions. And it was he who first proposed reduced finger printing to a system, and who proposed it to Bertillon. The latter was for a long time skeptical as to its utility, preferring his own system of measurements.

It was one of the most pitiful incidents of the Dreyfus trial that Bertillon who had written several works on identification through having been called on as an expert, gave an opinion which went far toward sending that most unfortunate soldier to Devil's Island. The question of the guilt of treason of Dreyrus hinged on the identification of letters written by him with that of the infamous bordereau. Both concluded that the bordereau and these letters to have been written by the one person; and he so testified, as one of three experts engaged state, two of whom declared against Dreyfus, the third maintaining that the soldier had had nothing to do with the bor-With the latter two experts engaged by the defense coincided. The verdict at that trial doomed Dreyfus to imprisonment for life in the pestilent tropics. Five years after, through the efforts of Zola, Picquart and others he was returned to Paris, where his case was reversed in the manner all the world is now familiar with.

THE PROLONGATION OF LIFE.

FROM a recent bulletin of the city health board we learn that the suggestion of Dr. Herman Biggs that every individual past middle age should place himself under observation of a competent physician, by whom he should be inspected regularly for the early discovery of degenerative diseases, has borne good fruit. It is a well known fact that these diseases arising from the wear and tear of modern life are rarely discovered before they have become irremediable, and that often a life insurance or other accidental examination reveals the un-suspected presence of signs pointing to early development of such maladies. These facts have led to a unique combination of men of science, philanthropy and business who have organized a life extension institute, which offers to the public facilities for regular examinations by trained physicians under the supervision of scientific men in various departments at stated intervals.

Some life insurance companies have already adopted this plan for their clients because it prolongs life and therefore premium paying. The life extension institute, however, is chiefly philanthropic, for although a moderate fee is charged the income is chiefly expended for improving the beneficent service and extending it to all classes. The fact that the board of directors is formed of men whose lives have been dedicated to public welfare and others noted for business capacity of the highest order, and that at their head stands ex-President

Taft, guarantees the lofty aims and integrity of its purposes. The efficiency of the beneficent work planned is insured by the men who form the hygiene reference board, at the head of which stands Professor Irving Fisher. The various divisions on public health administration, medical practice, chemistry, pathology, physical education, occupational diseases and others, which contain names that are synonymous with human welfare, augur successful administration. These gentlemen serve without compensation in the "work of human salvage."

The application of scientific efficiency to the prolongation of life by limiting the deadly habit of waiting until disease becomes irremediable is one of the most beneficent movements of very recent times.

Every individual, in whatever station of life, will derive advantage in saving of life and maintenance and working capacity from these periodical systematic inspections by experts and their counsels with regard to diet, exercise and other hygienic measures, which are most fruitful in the prolongation of life even after diseases like Bright's, heart affections, diabetes and others incident to advancing years are established. Their early detection in younger persons may prevent their development in the majority of cases. The trivial cost of these inspections precludes neglect by reason of limited finances, while the profitable outcome is obvious.—The N. Y. Sun.

THE LAND OF BEGINNING AGAIN.

I wish there were some wonderful place Called the Land of Beginning Again, Where all our mistakes and all our heartaches

And all our poor, selfish grief Could be dropped like a shabby old coat at the door,

And never put on again.

I wish we would come on it all unawares, Like the hunter who finds a lost trail; And I wish that the one whom our blindness had done

The greatest injustice of all
Could be at the gates like an old friend that
waits

For the comrade he's gladdest to call.

-Booth Tarkington.



ORIGINAL ARTICLES.

THE THERAPEUTIC VALUE OF FOOD IN DISEASE.—A GENERALIZED BIOCHEMIC STUDY OF NUTRITION.

BY THEODORE WILLIAM SCHAEFER, M.D., KANSAS CITY, Mo.

L'evolution, c'est l'ensemble constant deces alternatives de la nutrition; c'est la nutrition considerée dans sa réalité, embrassée d'un coup d'oeil à travers le temps.—Claude Bernard.

THE purpose of this article, from a purely therapeutic standpoint, is to encourage the medical practitioner along a line of inquiry pertaining to a subject to which very little attention has been devoted in the past. The aim is to encourage research or at least stimulate a desire for further information in regard to the therapeutic value of food in disease, instead of the customary one of viewing the nutritive value of food materials solely from the standpoint of digestion.

In pursuing a toilsome search through lengthy text-books the physician will find, when making an examination, that practically very little has been written that is of any importance on the subject of the therapeutic value of foods. It is, indeed, one of the most neglected subjects of medicine and surgery. This should not be so.

This is a new domain of therapeutics. Experimental researches on this question are most urgently needed, but they are not provided for either in the biochemical or physiological laboratories of our universities. In regard to food, man frequently follows a very blind instinct—his appetite, which is not a true guide in such matters, not being based upon any fixed physiological laws whatsoever.

It is rather paradoxical that something which so intimately engages the attention of mankind, like food and drink, has been so late in becoming an object of research. Possibly the prevailing belief that is sanctioned by time that there exists in man something higher than his corporeal existence that is not dependent upon food and drink. An-

other may be in the fact of the general inclination of man to investigate distant objects, instead of those that are near him which he naturally neglects. Because of the peculiar construction of the primitive man's mind, his attention has been attracted toward natural objects, such as plants and animals, instead of toward himself. Only when he became hungry and sick did his own welfare receive any consideration. The progress in the domain of the chemistry of foods can only be accurately followed and judged by one who is well informed in regard to those chemical constituents that occur in food proper, food luxuries, stimulants, accessories, condiments, flavors, etc. One who has gained information of the chemical, physiological and therapeutical importance of food obtains a deeper insight in this line of study than one who is not so prepared. The study of the therapeutic indications of food would be an ideal goal for the scientific physician in the successful treatment of certain diseases. He would find a specific medication, theoretically speaking, in the so-called specific values of the articles of nutrition or aliments. The belief is now slowly gaining ground that certain diseases can be successfully treated by the administration of properly selected and prepared articles of diet which have a distinctively active or medicinal influence over certain pathologic conditions.

This brings us to the study of trophotherapy which is the science that deals with the treatment of disease with food. Trophodynamics deals with the science of the powers and effects of foods. Trophology is the science of the nature and properties

of materials that are used as food. As our knowledge of the pathogenesis of a large number of diseases is imperfect, we are not in a position to lay down definite rules at present for the treatment and cure of disorders that are due to a constitutional, nutritional nature, except in a very limited number of diseases. In view of what has been accomplished by means of diet in scorbutus one is led by considerations of this kind to look forward with hopeful anticipation to the time when a science of experimental or physiological dietetics would assume a definite and recognizable form. The subject of the treatment of certain diseases by means of diet would certainly be an ideal The growing importance of food in both health and disease and the great attention that has been given in recent years to the subject of diet should certainly lead us to successful endeavor in this particular direction. Heretofore experimental researches in regard to food and diet have been conducted solely with a view pertaining to the nutritive value of food material and the requisite quantities for supporting and maintaining life in all its phases and activities. It is evident that certain kinds of food that are effective in promoting constructive tissue metamorphosis should also possess certain specific properties as is the case with certain proteid bodies, like the antitoxins, serums and alexins in disease. Reasoning along these lines we find that a certain variety of food contains ingredients of a nature that have a special selective and constructive affinity for various tissues and fluids of the body. The bodily framework, organs and other parts need a continual upbuilding and renovation. Some foods possess certain reconstructive ingredients that go to supply the tegumentary, bony and other structural parts of the body. The skin, the hair, nails, teeth and other structures of the body receive their corresponding supply of material from the ingested food. With the organic food material the organism receives a supply of potential energy which is converted into living force in the body. mineral elements of our daily food are principally concerned in the great life processes of osmosis and diffusion.

Besides the articles of food which we partake of at every meal there are a large number of other substances taken internally at the same time, although not intended to cover the daily loss in bodily substance, yet serve in making the food more savory and

palatable as well as digestible. They exert a beneficial influence upon the activity of digestion and the nerves, and occasion an increased utilization of the food in the stomach and bowels. After passing into the blood they stimulate the central nervous system and assist and increase the other functional activities of the body. (Dr. J. König, Diemenschlichen Nahrungs-und Genussmittel, Zweiter Band, 1904, p. 208.)

That the alkaloid containing articles of food luxuries are of great influence upon our nutrition, although they do not furnish but little or no real nutritive substances to the organism, is a daily observation and a recognized fact that is admitted by all observers. A cup of coffee or tea, partaken of after a great exertion, as well as a glass of wine, are capable for the time being to remove the sense of lassitude, a pipe of tobacco or a cigar permits us to forget for a moment the strong sense of hunger and arouse a feeling of comfort or ease, which is indeed a satisfaction to us. They increase the bodily capacity for work and dispel a feeling of weakness of the nerves and muscles occasioned by work or illness. In order to overcome the increased effort of exertion after partaking of a rich meal, which is essential for the digestion of food, we are accustomed to drink a glass of wine, beer or a cupful of coffee or tea or smoke a cigar to thus better prepare the body for other work. With respect to the modus operandi of these alkaloidal articles of food luxuries upon the metabolism of the tissues the most diverse and conflicting opinions prevail, into the discussion of which we cannot here enter. Coffee and tea have no positively proved action on the exchange of material, and their importance lies chiefly in their action upon the nervous system.

As there are certain foods that possess in a most characteristic degree properties that act admirably upon the nervous system there are others that possess physiological activities of a marked character, stimulating as they do the circulatory system, with the consequent increase of saliva, gastric juice and other digestive juices, eminently promoting digestion. Some possess a direct effect upon the kidneys, while others increase the alvine evacuations. Among the so-called medicinal foods there are some excellent appetizers, which are both tonic and nutritious.

Among the accessory articles of diet are the condiments and flavors, whose nutritive value is of a special character. They have a directly beneficial effect upon the processes of digestion by promoting the secretion of saliva, gastric juice, etc., in addition to the important fact that they increase the palatableness of food, hence increase the desire for food. With reference to the condiments, Brandl (Zeitschrift für Biologie, 1892, vol. 29, p. 277) has shown that mustard and pepper also markedly increase the absorption of soluble products from the stomach.

The writer of these lines believes that the effect of the condiments on the organism of man is (through the senses of smell and taste) primarily a psychical one. Secondarily, when applied directly to the sensitive mucosa they occasion an irritation of the end fibrils of the nerves of the salivary and gastric mucosa with consequent sensation of increase of appetite. He believes that the introduction of aromatic substances in the form of spices must serve a purpose. There is certainly a reason why the Southerner and the dweller of the tropics instinc-

tively add spices to their food. Most of the aromatic substances found in the various spices and condiments are aromatic bodies possessing antiseptic virtues. Introduced into the intestinal tract they act more or less as antiseptics. Most of the numerous aromatic substances which are converted into benzoic acid in the body are voided as hippuric acid in the human urine.

Fanciful theories have been constructed on the imaginary medicinal virtues of certain kinds of foods, as, for instance, some foods are supposed to display characteristics that are distinctly aphrodisiac, etc. It is indeed strange that since the origin of medicine the actual number of articles of food that are supposed to possess specific or therapeutic properties have been comparatively small indeed. It is a fact that the therapeutics of nutrition has not kept step with the progress of medical science. The paucity of exact observations in this direction is indeed very striking.

(To be continued)

CLEAN MILK.

By Charles Cristadoro, Pt. Loma, Cal.

Theoretically, cows' milk, from a tuberculin-tested cow, that is also free from udder disorders of any kind, should reach the breakfast table of the consumer, or the nursery, germ-free, at least, noxious germ-free. The calf, closing its lips upon the teat of its mother, so gets its milk free from any contaminating influence. Could cow's milk be directly transferred to a hermetically sealed and sterilized bottle, uncontaminated even by the air of the stable, the milk supply of a city would be above reproach.

Milk, is of all foods for the human, the most helpless in a sanitary sense, and yet no food that comes upon our tables is so easily affected by handling, exposure and environment as is cow's milk. In a germ sense it is the best culture medium known. We can protect ourselves by washing our fruit and vegetables as well as our meats, and then, in a germ protection sense, make assurance doubly sure by boiling and baking. Even our bread,

despite the pre-oven bacteria gamut run by it, comes fresh from the oven sterilized, as far as noxious pathogenic germs are concerned. But we can not wash our milk, neither can we boil it,—for infant feeding, nor can we bake it, in common usage as a potable milk.

An unwrapped, exposed and germ-infected loaf of bread can be made pathogenic germ free by placing it in a hot oven for ten or fifteen minutes, thus guarding against the unsanitary hiatus between the oven and the table.

Like the poor, germs, good and bad, are always with us, in fact human life itself is dependent upon germ life.

To begin with, as to milk, the cow must be healthy. A tuberculous cow or one suffering from inflammatory disorders of the udder, not always detectable, means infected milk. A perfectly healthy cow will, at times, void virulent tuberculosis germ-laden excreta, and these despite all precautions sanitary, do now and then get into the milk. In fact, of the sediment found in unsanitary milk, 90 per cent. of same will be found, on examination, to be cow's manure.

So given a perfectly healthy cow, the milk, because of its phenomenal susceptibility to germ infection, needs safeguarding from every direction.

The advent of certified milk has proven a god-send to the milk situation in the widespread influence along the line of barn sanitation and cleanly manipulation exerted. But only a very small fraction of the milk supply of the land is made under and within a "certified" environment.

Even, with the most commendable sanitary care given certified milk, it is yet unsafe, even dangerous in a pathogenic germ sense, at times, because of unsuspected and undetected udder disorders. Dr. Rosenau, whose efforts have been so beneficent and far-reaching along the lines of clean milk, advocates the pasteurization of certified milk during the season when infectious sore throat (streptococci germs) is at hand.

To illustrate.—A succession of infectious sore throat cases appearing along the line of a milkman's route, the Board of Health inspected the stables and cows and found no cause whatsoever to criticise either the sanitary environment of the stables, the methods of manipulation of the milk or the health of the cows themselves. On the face of it, the dairy was above reproach—yet along the milkman's route and nowhere else was the sore throat infection rampant.

Each cow was tagged, and a separate milking made in each case into sterilized pails, and the milking from each cow at once passed through a milk clarifying machine, the deposit thrown down removed at once for microscopic examination and the machine sterilized before another clarification was made. In two cases slimes were detected in the deposits separated from the milk of two animals. A microscopic examination disclosed the

presence of streptococci germs. two cows were removed from the dairy, the balance of the milk was served upon the route and not a new case of infectious sore throat appeared. The spread of the And this milk came epidemic ceased. from a dairy where everything was so sanitary that the Board of Health inspectors found nothing whatever to criticise. The trouble came, as indicated above, from unsuspected and undetected udder disorders. So much for the absolutely sanitary dairy, but how about the ordinary, commercial dairy, good, bad, indifferent and-filthy?

Take a stable only "near sanitary," and not very near at that, cows by no means above suspicion; unsanitary milking and handling methods, and far from sanitary utensils; unscreened stables and milk-room and the typhoid-and-other-fevers-fly freely present, what is to be done in such cases? And it is not too much to state that the great bulk of the milk of the United States, and Europe as well, is made under such conditions. The 100 per cent. sanitary dairy is so rare that we must remark about it and illustrate it and write it up in the magazines, to encourage the others.

As to dirty, germ-laden sediment-showing milk we are up against a general condition and not a theory, and the question is a burning one, a world-wide dietetic problem. They have cut the Gordian unsanitary lacteal knot, as far as the City of Paris is concerned, the home of Pasteur that was and Metchnikoff that is, by applying compulsory pasteurization, if I am not mistaken, 185° F. for 15 minutes.

A scientist made an estimate of the manure sediment in the daily milk of Paris and his figures were appalling. This same situation holds, as far as dirty milk is concerned, in the case of every dairy in the land where "certified" milk sanitation is not only disregarded but where shiftlessness and unsanitary conditions hold.

Of course, the milk of Paris and every city in the broad land, should not demand pasteurization to make it safe, if not clean, for human consumption. The milk should start from any and all dairies germ-free, and, of course, sediment-free, but it does not. So what are we to do, wait until all dairies in the country are made sanitary, along certified milk restrictions, and give up the drinking of milk and feed our infants upon "some other food" meanwhile, or what are we to do?

Paris pasteurizes her filthy manure-laden milk. The law steps in between the dairy and the home of the consumer as a sort of germ guardian angel. But the milk of Paris, although pasteurized and pathogenic germ-free and safe, but it is yet dirty milk, only the manure has been made safe in a germ sense by "cooking." You can take a piece of putrid meat and by either boiling or thorough roasting make it "fit and safe to eat," in a germ-free sense. And so with dirty, unclarified milk, that has been pasteurized.

Why not first, by mechanical means at hand and easily and instantly applied, pass the milk directly, fresh and warm from the stable, at once through the clarifying machine and throw down and out every particle of manure, dust, hairs, blood, slimes and all else, that, to a greater or lesser degree at some time, get into milk, all milk, even to the most certified of milks.

Metchnikoff, the champion of pasteurized milk, holds that all milk (he makes no exceptions) demands machine clarification. Now, if Metchnikoff be right, and it is conceded that, on milk, he is the foremost authority of the day, why not, if we must pasteurize our milk, 145° F. for 30 minutes, start with mechanically cleaned milk at least? Why cook the manure and other abominations found in the sediment of milk? We don't eliminate physical dirt from milk, even if we do make it pathogenic germ-safe, by pasteurization.

After a study of this clarified and pasteurized milk subject, extending over a period of 30 years, I hold as follows, and will continue so to hold until the day arrives when milk from absolutely healthy cows can be transferred to our tables as uncontaminated as it passes down the

oesophogus of the feeding calf, viz., that all milk, to make it safe and clean at all times, even certified milk, should be treated as follows: As soon as the milk-pail is brought into the milk-room its contents should be passed at once through a milk clarifying machine; then filled at once, with the animal heat yet in the milk, straight into sterilized and hermetically sealed bottles; then heated up to 145° F. for 30 minutes; then cooled down to 45° F. and, properly iced and shipped to town for consumption. Under such a procedure we can safely wait for the shiftless and careless dairyman to mend his unsanitary ways.

Illustrative of germ infection. Sterilized water is passed over a sterilized milk-cooler. We microscopically examine the water and find a presence of germ life, 5,000 to 10,000 bacteria to the c. c.

We take a pint of sterile milk, allow a fly to drop in it; and, if the milk be exposed to a temperature of 70°, in 24 hours the microscope will show a phenomenal bacterial presence. How many flies are strained from a milk pail or from milk cans is only to be conjectured where screens for stables and milk rooms are wanting.

There's method, most sanitary, in the removal AT ONCE of the "foreign matters" that get in the milk-pail, instead of allowing it to prove, during the 24 hours, more or less, en route to the market, a source of millions of germs. Certainly the instant removal of the filth from the milk before it has time to create germ havoc through solution is desirable and commendable. The ideal milk of the future therefore, I predict, is to be from healthy cows, in a sanitary environment, sanitary handling, instantaneous clarification, at once after milking, followed by bottling and pasteurization, then cooling down to 45° F. When that millennium arrives the world will have at last secured not only clean milk but safe milk.

Machine clarification will remove the physical dirt and slimes from milk but it will not remove, can not possibly remove, the latent germ influence of the foreign matters in the milk. The act of pasteurization does that. And as to pasteurization we have yet to read a paper by a physician, showing that pasteurization, 145° F. for 30 minutes, in any manner militates against the food value or digestibility of milk, the said paper to be based upon a protracted and thoroughly practical investigation.

Digitized by Google

WATER.

By D. L. FIELD, M.D., Jeffersonville, Ind.

In the Creation, God made everything necessary for man, and beast, before he created them; and one thing he made, indispensable to maintain the health of the animal and vegetable world, was water! Pure water is a life saver, and impure water is a life-destroyer.

The health giving properties of water, are eloquently described by the late John B. "Where is the drink that the 'Eternal' brews for all His Children? Not in the simmering still, does God prepare this precious essence of life,-the pure water; but in the green glade, and grassy dell: and low down in the lowest valleys. where the fountains murmur, and the hills sing; where the naked granite glitters like gold, in the sun; where the storm-clouds brood, and the thunder storms crash; and away far out on the wide, wild sea, where the hurricanes howl music, and the big waves roar,—the chorus sweeping the march of God,—there he brews it—that beverage of life, and health-giving water.

Everywhere it is a thing of beauty; gleaming in the dew-drop; singing in the summer rain; shining in the ice-gem, till the leaves all seem to turn to living jewels; spreading a golden veil over the setting sun; and a white gauze around the midnight moon. Sporting in the cataract; sleeping in the glacier; dancing in the hail shower; folding its bright snow-curtains softly about the wintry world; and waving the many-colored iris, that seraphs' zone of the sky, whose warp is the rain-drop; whose woof is the sunbeam of heaven, all checkered over with celestial flowers, by the

mystic hand of refraction. Still, always it is beautiful,—that life-giving water."

All Gough says is true of pure water, i.e., uncontaminated; but it is too often made impure.

When it is impure, it contains the germs of disease, and death. There can be such a situation, where there may be "water, water, everywhere; and not a drop to drink,"—that is, unfit to drink.

Healthful water can be obtained only from the clouds, by careful gathering, careful cleansing, and preserving. Water is a solvent of many substances, and is easily contaminated by impurities, and can by care be as pure as that found in the chemist's laboratory. It is distributed by nature; evaporated from the earth, and the ocean, and drifts in mists up to where the cool air condenses it into clouds; but in the process, it is charged with ammonia. and particles of matter that float upon the winds. Nothing is more easily soiled by impurities. It is the great carrier of morbific elements, and nutriments to build up animal and vegetable life. It is life's greatest blessing, and its greatest pest. Pure, it is life: polluted and foul, it is death. It has been proven, that a very large proportion of the most deadly disease-producing elements are conveyed into the system by water. It is the prolific cause of typhoids, malaria, and is the nursery of some forms of contagion. When the air is charged with humidity, or dwellings are damp, it tends to produce, or aggravate many forms of the most fatal maladies in the catalogue of human ills. It plays so important a part in all of life's relations, that we cannot be too earnest in our efforts to keep it pure!

MISTUH SKEETER.

Go 'way there, Mr. Skeeter! Don't you sing dat song to me.

I's hyud about yoh doin's; you's es tough as you kin be.

You's ben aroun' a-lunchin' on malaria an' things

Till you's jes' about as danjus as a rattlesnake wif wings. I didn' use to min' you when you come a-browsin' roun',

Ca'se I know'd a slap 'ud send you tumblin' senseless to de groun'.

But since I hyud dem white folks I's as skyart as I kin be.

Go 'way, Mistuh Skeeter! Don't you sing dat song to me.

--Washington Star.

Digitized by Google

SALT.

By H. O. Beeson, M. D., San Bernardino, California.

HERE are a few facts about salt.

It is true that salt added to food gives it a more palatable taste to those who have cultivated the habit.

But to those who have not become accustomed to it with food it is highly distasteful. The taste is strictly an acquired one. In the early day, when the wild Indian roamed the western plains, the Sioux tribe lived near Omaha. They made regular excursions to the settlements near that city. My mother was frequently called upon by the visiting bands to contribute to their gastronomic wants. She would spread some slices of bread with butter for them, which they invariably took out to the fence and wiped the butter off. They did not like the butter because of the salt. The American Indian did not, as a rule, use salt with his food. A few tribes, living on the lower Mississippi and in old Mexico, cultivated grain, but the balance of the American Indians lived by the chase and invariably ate their meat without salt.

Prescott, in his history of Mexico, relates the instance of the tribe of Tlascalans, with whom he made an alliance, and by their aid was enabled to establish himself in that country, in which he states that they had been imprisoned on a high mountain plateau for fifty years by the allied tribes about them, during which time they had not been allowed to visit the low lands to procure salt, and that after fifty years of salt deprivation, he found them strong, courageous and enduring.

There are many tribes of people in the world that make no regular use of salt with food. Bunge explains that the proportion of the potash salts in the food determines the demand for salt. Foods containing these salts in greater amount than the system requires create a craving for salt which neutralizes the potash and removes it from the body.

Be this as it may, there is abundant evi-

dence to show that the craving for salt is often more fancied than real.

The stock argument about the wild animals seeking salt is also largely taken without consideration. To the best of my knowledge and belief there is not a wild animal in existence that takes salt with its food. A few of them will seek the salt licks, but this they invariably do in the intervals of digestion. And in licking salty earth they surely get but little.

They certainly do not get the amount our teachers tell us is necessary for their maintenance of health. In England it is customary to raise cattle without salt, or at the most, they do not give nearly the quantity we give in America.

Foods contain salt (normal organic) in varying proportions rarely more than one half of one per cent. Marine fish usually contains one to one and one half per cent. Mammals about one half per cent. Vegetables are poor in salt, rarely exceeding two tenths of one per cent.

Human blood contains four-tenths to fivetenths of one per cent. The same is true of the tissue serum. The cells contain no sodium chlorid. They will not take it. They will give up some of their water to dilute a pabulum of greater saline density than their own. This shrinkage becomes fatal when the osmotic density exceeds ninetenths of one per cent.

Mucus ordinarily contains 10 to 12 parts per thousand of salt in salt users. What it contains in non-salt-users we know not, for all examinations have been made on salt users.

Nothing is more certain than that the law of osmosis is as immutable as the law of gravity or that of the diffusion of gases. So, when two solutions of different densities are placed upon opposite sides of an animal membrane there will be an equalization of the two fluids in osmotic pressure. Hence, if the mucous coating contains 10 to 12 parts per M there will inevitably be

an outward flow of serum to dilute the offending density. Likewise, if the alimentary contents contain a greater proportion of salt than the blood there will be an exosmosis, filling the digestive tract with a fluid that is not digestive. This outward flow of serum occurring at the time when the secretory glands should be the most active, and being derived from the blood supply that furnishes them with material from which to make secretions, necessarily inhibits the production of digestive secretions and in proportion inhibits digestion. No physiological truth can be plainer than this.

The amount of salt that can be used without producing harm can not be determined by the sense of taste alone. It must conform to the physiological needs and must not exceed the limits of cell integrity. A cell cannot exist in a solution of greater osmotic density than nine parts per thousand, for beyond that it will give up some of its water and shrink, and thereby becomes incapable of performing its functions.

What is our consumption of salt per capita per diem? I have been unable to find in medical literature any statement of the average amount used by the American people. Charles Achard states that the average consumption of the French people is 20 grams. That makes 300 grains. Our War office gives the daily ration to the United States soldier as 16-25 of an ounce. If I am not mistaken that makes 307 grains. The soldier's ration of food is 35 ounces. This is a proportion of 1 to 55 or 18 to 1000. We may take it as the best criterion of the amount used by the American people from which the American soldier is derived. 300 grains weighed out fills a tablespoon That is what we use daily. heaped up. This is the result of being guided by the taste alone, giving no consideration to the physiological needs of the body or of the evil effects of the increased osmotic tension upon digestion and nutrition.

All physiologists agree that 95 per cent. of the salt ingested is eliminated unchanged within twenty-four hours. Then, of the 300 grains eaten daily by the average American, 285 grains are cast out of the body as foreign material as rapidly as the emunctories can accomplish the work. And who is there to say that this can be carried on for years without harm? The history of salt using nations proves beyond question that something is transpiring to make them the unhealthiest animals in existence. Such daily repeated glandular exhaustion by exosmosis

would logically, and practically does, produce the very condition of glandular torpidity that afflicts civilized mankind.

I am not unmindful of the role of salt in keeping the colloids in solution, but that fact can not be used to justify the intemperate use of this condiment. Bunge and other observers of his class testify that 15 to 30 grains daily are sufficient to meet all of the demands of nutrition. That statement conforms to well established physiological facts and agrees with the proportion found in the fluids.

That osmosis, or otherwise called diffusion, is one of the most potent factors in cell activity can not be questioned. That, and chemic action, are the two fundamental factors in the taking on of nutrient materials and the discharge of effete matter or waste. Without these two factors in the activating of cells, there could be no special, zymotic or innervation influences. With these two factors right, all other factors would be right; with these two factors wrong, all other factors would be wrong. Hence, what is more important than keeping osmotic and chemic equilibrium normal?

Yet a search of the medical literature will reveal an almost entire absence of consideration of these matters. And very recently a book writer of Philadelphia in replying to a letter of mine stated that he did not consider these matters as fundamental. If the interchanges of chemical substances constantly taking place in all nutritive processes and the force of diffusion actuating them are not fundamental I wonder what is an essential force in nutrition

The use of an excessive amount of salt with food causes:

- 1. Inhibition of the production of digestive secretions.
 - 2. Consequent retardation of digestion.
- 3. Favors the growth of saprophites by reason of delay in digestion, with consequent slight but persistent ptomain toxemia.
- 4. Retards absorption, hence interferes with the prompt removal of the products of digestion. "Saline solutions are absorbed in a ratio inverse to their density."
- 5. Being eliminated in large part by the mucous membranes, the exosmosis produced causes exhaustion and final infection, and the foundation of chronic catarrh is laid.
- 6. The daily extra work put upon the emunctories in eliminating the surplus and the evil effects of the hypertonic osmotic tension on the cells results in general gland-

ular insufficiencies and final degeneration.

- 7. The hypertonic osmotic tension of the blood serum exhausts the red cells of their water and makes them poorer oxygen carriers, thereby inhibiting metabolic processes and the oxidation and elimination of bodily waste.
- 8. The bodily distresses caused by these disturbances of metabolism and elimination, and the demand for diluent due to the presence of an undue amount of this highly os-

motic agent, together with the mucous membrane excitation caused by the excess of sodium chlorid in the mucus bathing them, are the foundation of the drink evil and the sexual perversions. If not the chief cause they are certainly important ones.

9. A sufficient amount of salt to be used daily is 15 to 30 grains to meet all of the demands of nutrition and any in excess of this is not only useless but distinctly detrimental.

CONTAMINATED FOOD.

By A. E. Bear, Campen, N. J.

THE "Pure Food and Drug" laws take care of the ingredients going to make up the food stuffs that we eat and the medicines we swallow. Now it needs another law to protect us from the germs which. after floating round in the atmosphere, settle upon and breed in the food exposed for sale. All the care lavished upon the meat, and other viands previous to their being stamped "pure" by the Government will not prevent their carrying diphtheria or some other loathsome disease into an innocent household if it is exposed on a counter where dozens, yes hundreds of people's coat sleeves knock against or drag over it, and the breaths of those hundreds of all classes and colors contaminate it. The only thing remarkable in the matter is that so little disease has been contracted in that way-or rather has been attributed to that source.

To be shut up in a room unventilated for hours at a time, though alone, is not healthful; to be thus confined with other people is bad; but even if the room is large, to be in there with hundreds is far worse. We then take into our lungs vitiated, stagnant air which poisons our systems and undermines our health. We would refuse to drink water that had stood thus exposed in a pitcher for a couple of hours. Indeed, we would scarcely wash our hands in it. We would call it poison. Yet we buy and eat food which has been exposed in the same way and declare it to be good. Potato or lobster salad, deviled crabs and clams, roast meat of all kinds, boiled hams, macaroni and sauerkraut will absorb germs in the same way as will the water. Germs, by whatever name they are designated, will breed in food, especially that which is prepared with gelatine, as easily as in the air or the water.

The law requires the elements that make up the foods be pure. The government inspects also the buildings where the food is prepared; but now is the time. before a great epidemic of some loathsome disease sweeps over us, to protect the public still further, i. e., by the manner the prepared food is exposed for sale. It is far from appetizing to see a sleeve, regardless of etiquette, drag over the salad or meat on the table when you know the owner, and can surmise the germs the sleeve carries; or to see fingers flit over or poke into some delicious dish even when you know that those fingers are perfectly clean and as free from germs as any fingers are likely to be. Go into a delicatessen shop where the prepared food is exposed to public view and sampling in plates, pans, jars, kegs and every other device known to human invention to render it attractive enough to tempt the appetite and touch the purse. Hundreds of people pass by and gaze at it. Some stop to sample a particularly toothsome dish. Some stop to buy. There being no other place convenient to deposit that bundle, they lay it on a pile

of cinnamon buns or rolls. A muff they push between two bowls and the straggling fur, feathers or ribbons drag in the mayonnaise dressing of the salad, and the handle of the bag flops into the liquor in which pickles are also immersed. Indeed, the people are more concerned with the harm done to their belongings by the grease or vinegar, than by the havoc their belongings might do the food. That is human nature. One man whose attention was called to the fact that his sleeve was dragging in the tomatoes replied, "Oh, that doesn't matter. It's only an old coat."

Is it not an inconsistent state of affairs when every precaution is taken to avoid contamination in the manufacturing, to keep the factory light, well ventilated, clean by means of steam and vacuum machines, to sterilize all the instruments used and afterwards the retailer offers it as a repository, an asylum for all the germs in the universe? Why should the retail store not be subject to the same law of sanitation as the factory? There is a factory nearby, and doubtless there are many others, where expert manicurists are employed to care constantly for the hands of the employees. Other men and women are employed to oversee continually the cleanliness of those who in any way handle the food, from the time the raw material enters till the finished product is carted away. Some of that product is used in the concoction of dishes placed on delicatessen counters and people have coughed over it. Nobody would dream of coughing over a dish on the table if only because it were the height of ill manners, but a store seems different. Would you want to eat that food? Yet if you watch a few moments longer you will see some one buy it for supper. Wonder, now, how some ill-fated individual contracted the whooping-cough or the white plague. It is a fact being more and more generally realized by physicians that the most dangerous way of spreading diseases is by sneezing. As recently as last week a man was observed sneezing over such a counter. Reproved for it, he might have answered, "It was an accident." Yes, but the food should have been protected against such an accident.

"Pure Food" has become such a fad the people taboo shops which do not advertise "Pure Food." With the thought-

lessness characteristic of a crowd, however, they neglect to demand that the food be treated in a sanitary manner while it is in the shop. On the rear counter of one of the largest delicatessen shops in Philadelphia, before a door opening directly on the street and through which the wind was driving dust, a white coated clerk poured a liquid into small bowls filled with brown, dice-shaped objects. Occasionally he poked the little cubes with his finger, once he stopped to make change for a customer, then with the same hand which had held the money he again poked up the dice. He said it was tongue in jelly. Who would want to eat that concoction with the dust from the street, the dirt from the money, the moisture of perspiration which most naturally is on the man's hands and other impurities besides? Nobody would use a handkerchief found on the street without first subjecting it to a disinfecting bath. Nobody would put money into his mouth and yet, every day food is purchased and eaten upon which both articles have been laid. Common sense shouts to the world that such food has absorbed some of the germs from the articles with which it has come into contact. Not one of us would use a menthol pencil or tube which some one else, a stranger especially, had been holding to his nose and breathing through. We would not risk drawing into our lungs any disease with which he might be afflicted, yet why do we buy and put into our delicate stomachs victuals over which not one only, but a hundred persons have breathed and leaned and fingered and talked and coughed and sneezed, mayhap? That is disgusting to hear but it is a fact.

Many of the states forbid the use of public drinking-cups and in a short time will put a stop to public towels, soaps, combs, brushes and other articles of personal use. Physicians and the bureau of public health are advocating the abolition of pets—the cat and the dog—as disease bearers, they are blaming epidemics upon the house-fly, yet if the truth were learned couldn't the spread of disease be traced in many cases, to these cooked food counters over which persons with a cancer in the mouth or a bad case of tuberculosis are liable to have coughed? The public is particular about the water and the milk and often about the air that it breathes.

yet why have both state and public neglected the most vital question of all, the manner by which the cooked food is exposed for sale. Surely the food standing in a hot, close room where the foulness of the air due to the thousands of breaths and the dust from the streets is overwhelmed by the heavy odor of spices is neither sanitary nor healthful.

If we buy cooked food, and it most assuredly is a blessing that we can, let it be enclosed in glass cases to protect it from, not only the disease-bearing muffs, gloves, bags, bundles, etc., but also from the listless fingering of the careless clerks and customers. A man buying some sauerkraut picked up his child who had insisted upon crawling over the floor, incidentally its dress rested upon a roast turkey and it grabbed in both hands a deviled crab. The father carefully separated the crab from the child and replaced it on the pile of delicacies of the same nature. Nothing was said; and somebody bought and ate that crab, defiled as it was with dirt from the floor. If the food had been properly enclosed in glass cases such an accident could not possibly have happened. It is a fad also to have cakes made openly in full view of the customer. Recently in a department store where they were baking cakes, a cake was slipped from the pan and slid over the oil-cloth counter from which a woman had just lifted her baby. Somebody bought that cake and ate it: was it

you? Doesn't your stomach turn just a little at the thought?

If the public want to see cakes baked and other foods prepared let their desire be gratified, but behind glass partitions which protect from the dust of the street, the breaths, the fingering, flies and other insects. Let these rooms be well ventilated with filtered air, made pure by being drawn through tubes or other mechanical devices in which is a screen of Then again, the food cotton, perhaps. which is already prepared should be kept in cases where the dust forced in by the opening and closing of the doors could not settle upon it. Glass cases, sunlight and filtered air where foods are kept and it is not at all improbable that the hospitals would not be so over-crowded and the death rate would necessarily be lower. Such precautions would prevent disease germs from scattering. "An ounce of prevention," says an old saw, "is worth a pound of cure." And, continues another, 'A word to the wise is sufficient." If we are as wise as we think we are then we will insist upon the proprietors of delicatessen shops, be they large or small, using every precaution that light, air, and glass as well as water can produce. It will spare the board of health the expense of tacking so many cards upon doors warning those without that there is scarlet fever, measles, small-pox and dozens of other malignant diseases, not to mention the prevention of typhoid, munips and a hundred other contagious diseases.

IS FUMIGATION WORTH WHILE?

The value of fumigation after infectious diseases has during at least two decades past been questioned by sanitarians; and one may now fairly well conclude that this procedure should be relegated to the past. It is the laity which has really insisted on the use of smell-making "bactericidal compounds," the idea being that "they smell so bad people open the windows and the air gets in." Thus it has been difficult to withstand popular desire, especially when the semi-panic following a case of diphtheria has traced the case to a school-room or a public building. Then parents, teachers and

oftentimes physicians have been so insistent on fumigation that public officials have found it judicious to comply. Dr. Arms and his colleague of the Bacteriological Laboratory of the Boston Board of Health, have gathered some really scientific facts relating to fumigation and have made some pregnant observations: "Some fumigate after measles and whooping cough; others consider this unnecessary. Some pin their faith to formaldehyde, others to sulphur dioxide, and still others to fresh air, sunshine and scrubbing." And the gaseous fumigation is carried on in different ways

—formalin is volatilized in a generator, the gas being introduced under pressure through the keyhole or some other aperture in the room, all other openings having been closed; then there is the oxidation of methyl alcohol, the spraying of formalin on sheets and allowing it to evaporate, the volatilization of solidified formaldehyde, and the use of permanganate of potash.

Changes have from time to time been made by the Boston Health Department, the latest being the use of potassium permanganate in January, 1910, and the adoption in November of that year of fumigators containing solidified formaldehyde. During these changes careful records were kept to determine the comparative values of the different methods. Thousands of fumigations were made under service conditions, the curious fact being evolved that in some of the tests, no matter what method was used, certain organisms survived the fumigations; yet in none of the places under experiment did secondary cases of the disease arise. In the diphtheric investigations 19 cases were found in the same house during the first week after the original case was reported, 16 between the first week and the fourth (including the latter) and 13 after four weeks from fumigation. In the 19 cases of the first week 15 were sent to the hospital and the fumigation performed within forty-eight hours of the report; here evidently the secondary cases were from exposure to the original source of infection or to the patient who was removed at some date preceding the report. Thus contact was here a more probable cause of the secondary cases than the catching of the disease from room or furniture during the brief time between reporting and fumigation. The other 4 cases followed the release of the patient from quarantine. Thirteen cases became manifest from thirtythree to fifty-eight days after fumigation; but these can hardly be placed to the credit of the room. There remained then 16 cases possibly referable to room infection; but they were at the same time not free from suspicion of contact with some previous case. The story of scarlet fever is practically the same—with 12 "return" cases within the first week after reporting, 7 after four weeks and 8 in the interim, with the deduction that these infections came from persons rather than from inanimate objects.

It should be noted that these figures signify return cases from some thousands of original, and cover the periods of changes in method. In order to demonstrate the fallacy of fumigation the Board has since July 4, 1911, authorized the use of practically no fumigation after diphtheria and scarlet fever; using for each room, no matter what its size, a fumigator that would disinfect not over 500 cubic feet. This would mean a room $9 \times 7 \times 8$ feet; so that fumigation for most places was notably inefficient. householders were instructed to air the room thoroughly after the "fumigation," and to wash all woodwork. After all there is no better disinfectant than that of nature—pure air in abundance.

The results of this investigation, covering eighteen months, under the two systems, bear out the contention that fumigation after diphtheria and scarlet fever is unnecessary; and such would undoubtedly be found true of most other infections. Arms concludes: "If the labor of fumigation after diphtheria and scarlet fever would be dispensed with, as it has been in many places after measles, and real disinfection carried on after tuberculosis, much good would be accomplished, and the public would then realize that it is the individual who is the cause of the spread of acute infectious diseases in the great majority of cases."

Old Gentleman—"Well, my boy, and when does your birthday come?" Boy (who has been cautioned not to fish for presents)—"Oh, it passed by a long time ago—a year next Saturday."—Life.

"Yes," replied the smart boarder, "it certainly is tough."

[&]quot;It's hard," said the sentimental landlady at the dinner table, "to think that this poor little lamb should be destroyed in its youth to cater to our appetites."

CLEAN UP-KEEP CLEAN.

LAST year the New York City Department of Health instituted a Civic Spring Cleaning. Some citizens got so excited over the idea when it was announced that they behaved like Mark Twain's blubber who implored the bystanders to hold him back, he felt so full of fight; they started right in throwing old washstands, bedding and what not else through the windows into the streets and had to be restrained by the authorities. May 1 was the date set for the ceremonies to begin. The Street Cleaning and the Water Departments, with certain municipal bureaus co-operated loyally with the Commissioner; and all kinds of civic organizations (especially women's clubs and leagues) took effective part. The city was divided into about one hundred sections, a dozen or so of which were to be covered daily; the housewife was notified beforehand on what date to be ready for the carters. All rubbish and dirt were removed from cellars, yards, alleys, the environs of houses, fire escapes, roofs, vacant lots, catch basins and streets, which latter were then thoroughly flushed. Offensive trade odors, nuisances, smoke and cinders from factories were to be minimized: flies were to be starved rather than swatted; the lying-in chambers of mosquitoes to be abolished; rats and mice separated from their provender. Especially were grocers, bakers, fruiterers, butchers, fish dealers, confectioners, hotel and restaurant men to keep their places clean and to screen or window their wares.

This idea of Civic Spring Cleaning should spread again this year by a kind of beneficent contagion all over the Union; every city, town, village and hamlet in the land should be a spotless community—not only in May, but all the year around. The idea, when you come to think of it, is bigger than a presidential election, with at least as much fun to be got out of it. In every berg let closets, bureaus, trunks, satchels, nooks and crannies from cellar to eeiling throughout the household be searched for hibernating flies and of vermin (especially that polecat

among insects which shall here be nameless and of which the most careful housewife cannot always prevent the entry). Screen windows and doors; screen food with meshes 18 to the inch to keep out mosquitoes as well as flies. And, above all, keep those winged disease sponges out of the sick room. In rural districts the snow covers a multitude of insanitary sins-all kinds of refuse, garbage, bedding, straws, waste paper, rags, fermenting stuff, dead animals accumulate from November to April; come spring then there is a vast amount of putrescence to be got rid of. Attend especially to the manure heap; for it breeds 95 per cent. of the flies; but don't neglect barns, chicken yards, hog pens, closets, and the like.

A single perverse headed citizen may keep a whole neighborhood pestilent. with such an one in a brotherly way; if he won't see the point be disagreeable to him every way you can think of until he does. Perhaps you may have to report him to the authorities. (Maintaining a nuisance by the way is in most places a misdemeanor punishable by law.) And maybe the authorities will have to be jacked up. If they won't enforce the law pound them until they do. Work up the psychology of advertising as applied to civic cleanliness. gratiate yourself with the women's clubs; get boards of trade, teachers' institutes and farmers' leagues busy; engage lecturers to show their horrendous lantern slides; get the clergy to preach sermons on the cleanliness that oftentimes leads straighter than theology to godliness. Get placards put in windows, and posters on fences. Above all, corral the press. Your own State Department will most likely have a lot of literature in which you will get all the necessary pointers; what is lacking you can get by mail from the Bureau of Entomology of the Department of Agriculture at Washington and from the Fly Fighting Committee of the Merchants' Association, 156 Fifth Avenue. New York.

CHEESE. A NEGLECTED FOOD.

OUR Federal Government is distributing useful knowledge on cheese as an economical diet. The latest pamphlet is Farmer's Bulletin 487, which any housewife in the land, either on a farm or in the city, can have by simply sending a request to the United States Department of Agriculture, Washington, D. C. Here will be found dozens of most appetizing recipes for the preparation of cheese both as a food and as a relish.

Cheese has a very high food value and a very low price as compared with other foods. Fresh beef has, weight for weight, little more than one half the food value of cheese; this is so also of practically all the fresh meats. Fish and pork have each much less nourishment in them than cheese: whilst eggs have a higher percentage of water. About the only product that rivals cheese in food value and cheapness is dried beans.

The nutritional value of cheese is very great; this food contains in very compact form pretty much every thing that is needed for the sustenance of the body and the statement is true of all kinds of cheese, including European brands.

Some people think cheese is not digestible, that it disagrees with the stomach; this is only a notion. It has been proved that when well cooked and prepared, cheese is a very digestible food, not only as a delicacy or a condiment, but as the chief part of a meal.

We are somewhat blind to our opportunities; we send our American cheeses (which are called also in the market Cheddar cheese) in large amounts abroad. English people are especially glad to get them and they eat many of them; not only because they are cheap but also because they taste good and nourish the body.

The average American citizen prefers to eat 170 pounds of expensive meat a year, besides fish and poultry in proportion—but only four pounds of cheese; this may be one of the reasons why our people complain so much of the high cost of living.

The Swiss are famous for eating cheese; this food with bread forms a large part of the diet of this very healthy people. The Germans consume large quantities of their excellent skim milk cheese, one variety of which the soldiers are said to salute as being of superior rank. The French also have some very highly flavored cheeses, in which the germs that produce the flavor do really seem to be working over time. All the same there is no harm in highly flavored cheeses; they are all wholesome and nutritious.

A SONG OF SPRING DAYS.

Sing a song ob spring days, All de worl' in bloom, Mr. Bluebird singin' Mid the flowers' perfume. Mr. Catfish bitin', Mr. Bee a-hummin', Sing a song ob springtime Comin'. Comin'.

Sing a song ob springtime, Sunshine warm an' bright, Turtle dove a cooin'. World all full ob light, I longs to hear de peckerwood On de tree a-drummin', Sing a song ob springtime Comin', Comin'.

-P. H. A. in Florida Times-Union.

CONDOLENCES.

Mrs. Hen was in tears; one of her little ones had been sacrificed to make a repast for a visiting clergyman.

"Cheer up, madam," said the rooster, comfortingly. "You should rejoice that your son is entering the ministry. He was poorly qualified for a lay member, anyhow." —Exchange.

WHY HE KNEW.

A Christian Scientist found a small boy sitting under an apple-tree doubled up with

"I ate some green apples," moaned the

boy, "and how I do ache."

"You don't ache," answered the C. E.;
"you only think so."

"That's all right," said the boy; "you may think so, but I've got inside information."—London Opinion.

RURAL SANITATION.

THE HOOKWORM DISEASE.

By WILLIAM H. PETERS, M.D., PROVIDENCE, R. I.

A YEAR or so ago a father, mother and seven children were all living together in a squalid, one-roomed cabin, with no possibility of the ordinary decencies of life. The ground nearby their home was becoming saturated with their night soil, a peculiar factor to their undoing, as we shall see. They were just about starving on a small, wasted, unproductive farm. They were all illiterate and all practically "no account." Every phase of their natures-mental, moral, volitional, physical, spiritual-was dreadfully below par. It is one of the saddest things about existence, and one we cannot get away from, that all phases of human nature are intimately and inevitably bound together, so that the whole of any one life goes to pieces, whenever there is anything the matter, for any length of time, with any one phase of that life. what was really at the bottom of the trouble with this whole family was that it was physically sick. Every member of it was suffering from the hookworm disease, which is caused by a microscopic hook-mouthed worm found in dirt (especially sand), or in muddy water, or in human discharges. The eggs of this worm get from the ground into cuts or bruises in the feet, then into veins and so to the heart, the lungs, the windpipe, and down the gullet to the stomach and then the small intestine (which is its paradise), the egg developing into the worm during this migration. Or the worm is eaten with uncooked vegetables or is taken in from unwashed hands or drunk in dirty water. There are said to be dirteaters (geophagi); and of course these people (who at most are probably very few indeed) have the hookworm disease.

When the parasite reaches the small intestine it hooks itself to this membrane and sucks blood from it. When it lets go there is a minute hemorrhage from the wound; and so the precious life fluid is drained. Then the germs of other diseases get an

entry through that wound; and indeed the hookworm, besides being a vampire, is considered also to introduce poisons of its own making into the system of its host. sides, the part of the intestine thus attacked is put out of action, so far as its natural function in the body is concerned. Who wouldn't be sick physically, morally and every other way; who wouldn't be without ambition, in such circumstances? wouldn't be disheartened and go to pieces, having such a disease? So naturally, the poor people thus attacked become unfit for work and are accused of laziness. enough, the "laziness bug" has got them; they are really grievously ill and oftentimes die, especially the children. Here is the cause of the "common anemia" of our The sufferers (at least two Southland. million of them) become anemic (weak, watery-blooded), they have bad stomachs and bloody dysentery; they are feverish; their strength is sapped (a terrible thing in a man once strong); their vitality is lowered, so that besides having this disease they become easy prey to others-consumption, typhoid, pneumonia, malaria. Their skin is dirty or muddy or waxy-white (Florida They have lack-lustre eyes complexion). (like those of the Ancient Mariner); and an odd, pitiable, blank stare. They are short-winded and their hearts palpitate and sound rough in the beat. The children are stunted and ill-developed; and pot-bellied many of them (like a sybaritic dwarf) on account of enlarged liver and spleen and The victims of unintestinal flatulence. cinariasis (so the doctors call hook worm disease) have swollen feet and "ground itch," due to the penetration of the skin by the eggs. Mighty sick, such patients are, as any one will agree. They are worse in summer than in winter, the blacks suffering more than the whites. Hookworm disease is most common in the tropics, and among miners, brick and tunnel workers.

This was the Egyptian chlorosis (or green sickness) of thirty and more centuries ago. Above the thirty-fifth latitude it is rare; south of this it is very prevalent. One quarter of the people in Porto Rico have been dying of it; it seems prevalent throughout the West Indies. No doubt some of our soldiers brought it home in the Spanish-American war. Hawaiians who emigrate to us certainly bring it with them -not all, of course. The disease is not uncommon in the Philippines. The poor suf-fer most, but not altogether; thirty per cent of the students of the University of Georgia, many of them sons of the best and most influential Southern families, were found afflicted.

Well, to get back to that wretched family. The Rockefeller Commission for the Eradication of Hookworm Disease came along and, aided and abetted by other agencies hereinafter to be specified, cured all that family of its abhorrent disease—quickly, pleasantly and safely, as the doctors say. By the use of two simple remedies—thymol and epsom salts—all were completely restored to health, under Providence, physically, spiritually, mentally; and all at the slight cost of 77 cents the head or something under seven dollars for the whole performance.

Here was one of the most striking and hrilliant before and after illustrations ever presented for the consideration of the civilized world. The whole family lost that dreadful, blank stare into nothingness; they became virile and sweet, manly and womanly, clean body and soul! The father and elder sons replaced that filthy cabin with a neat frame dwelling of two stories, all of their own building. The younger children are getting their blessed schooling. farm is productive and amply sustaining, because now the family have the strength and the grit to work it. They have plenty of initiative now; and there is no telling where this felicity will eventuate (as they say in the minstrel shows), or how near the stars that family are going to land.

This is just an example. Since the aforesaid Commission got busy the same trick has been turned many thousands of times, and more than 400,000 of the dear Lord's people—men women, and children—have been regenerated, literally made over. Mr. Rockefeller, by way of starting the game, announced his readiness to meet all expenses up to one million. The Commission, composed of eminent men in medicine and

in social science, got to work October 1909; its office is in Washington D. C. United States Public Health Service has been powerfully adjuvant. Dr. C. W. Stiles of that Service, first directed public attention to the hookworm situation, and it was his piece in the paper that attracted Mr. Rockefeller's eye, and became the genesis of the Commission, of which Dr. Stiles is the Scientific Secretary—more power to his elbow! It began to determine the area and the degree of hookworm infection; to treat the sufferers; and to remove the source of infection by putting a stop to soil pollution. The State was adopted as the unit of organization; and co-operation with existing health agencies was established. A State Commission and a State Board of Health jointly appointed a State Director of Sanitation, who organizes and directs the work within his borders. A field force of sanitary inspectors and a laboratory force is also provided; and they, co-operating with local health boards and individual doctors and citizens, make up the organization.

One of the chief objects is to educate the body politic in prevention; and in this work -purely voluntary and a labor of love--physicians are enlisted; women's clubs and churches are active; boards of trade are on the job; newspaper articles are gotten into the ever-potent and ever-willing press; bulletins and letters are distributed; lectures and demonstrations are given; and any amount of personal service is done. enormous factor is the local temporary dispensary, to which the country folk flock most eagerly from many miles around, by boats, by train, by any possible conveyance a dozen miles over rough roads; men and women and tender children travel by foot, until the anemic fall by the wayside and are taken up and brought to the blessed haven in the wagons of the up-to-date Sanitarians. "It looked like the days of Galilee"—with healings assured for almost all! At three in the morning the sick are there. They linger, gather in groups around the exhibittables, listen to the stories told by those who have been sick and have been restored, and return to their homes to report to the neighbors what they have seen and heard.

In order that no man may speak of indiscriminate charity, and of the humiliation connoted by the term, the expense of this work is borne jointly by the Commission, the States and the counties benefited. The Commission's third annual report tells of the work done in 1912, when an average of

762 hookworm victims were treated daily (except Sundays)—238,755 in eleven States, Virginia, the Carolinas, Georgia, Alabama, Louisiana, Mississippi, Texas, Kentucky, Tennessee and Arkansas; 400,000 in all since the work began. About half the rural children examined have been found afflicted; they belonged mostly to families on the edge of pauperism, and sad to state, not infre-

quently over the edge and in the depths below—and this in hundreds of communities. Here is indeed an epic, physical, psychic and economic regeneration; a noble reconstruction, and one altogether benign and friendly, as far as the poles from the rancor and the bitterness which attended that other reconstruction two-score and more years ago, and altogether atoning for what was mean and wicked in it.

BIRD CONSERVATION.

For at least a score of years past there has been a brutal and insensate destruction of American birds. Adequate protection has been denied them by reason, it would seem, that "the sportsmen won't stand for it." It may be the gunner won't; but every sportsman worthy that estimable title, rather than objecting, will be very strong for such regulations as may be made by Dr. T. C. Palmer, of the Biological Survey of the Department of Agriculture, for the enforcement of the McLean law to this end. The notion is erroneous that our birds are the exclusive property of those greedy and selfish men who shoot up to the bag limit. Ninety-five per cent., game and not game, belong to the people who haven't the remotest idea how to handle a gun.

Our shore birds are fast vanishing. There are, or have been, more than sixty species of them in North America. They frequent the shores of all bodies of waters; but many are equally at home on plains and prairies. They used to swarm along the Atlantic coast and in our prairie regions; to-day they are pitiably scarce. The wonder is, they survive at all under conditions so adverse to them. In both fall and winter they are shot along the route of their north and south migration. They decoy readily and persistently, despite murderous volleys. Mr. W. L. McAtee, of the Biological Survey ("Our Vanishing Shore Birds," Civ. 79), indicates other ways by which their existence is made precarious.

Nor need we plead for bird protection on sentimental or esthetic grounds alone. Many species eat such mosquitoes as are virulent

disseminators of disease germs. Fifty-three per cent. of the food of birds from one locality was found to consist of mosquito larvæ; and among the insects thus consumed was the salt-marsh mosquito, for the elimination of which certain States have expended much in money and energy. Adult house flies and their larvæ, which seriously molest valuable livestock, have been found in the stomachs of several species of birds. The North American fever tick, so injurious to cattle, are devoured by the killdeer and the upland plover. Crane-fly larvæ are most destructive in grass lands and wheat-fields; shore birds are avid of these flies. Birds again are very fond of grasshoppers, which are most destructive of corn, cotton, and other crops. Twenty-three species of shore birds were found to have fed on Rocky Mountain locusts—great grain-consumers. Some of our severest economic losses are occasioned by insect destroyers of forage and grain crops; these pests are a natural food of shore birds. The army-worm, cutworm, cotton-worm, tobacco-worm, and potato-worm are meat for the avocet, woodcock, pectoral, and Baird sand-pipers, upland plover and killdeer. The principal farm crops have many beetle enemies; birds thrive on these beetles. Much else to the same effect is on record. It were well indeed if the governments of all our States would second the Biological Survey in the enactment and enforcement of legislation protective of bird life. The real sportsman would heartily second such legislation; only the "game-hog"—who after all isn't very numerous-would remain disgrumbled.-Lippincott's.

WASTE DISPOSAL.

"Out of sight, out of mind" is a maxim well enough suited to some aspects of life; but it will not do as to hygiene and sanita-Dr. H. B. Bashore* explains how, in country houses where water under pressure is available, water-carriage of human excretion is desirable, by the use of waterclosets and plumbing. There then follows, as a matter of course, the use of the sewer and the great question of sewage disposal. For a house situated near the sea or on a tidal river the sewage is safely run directly into such a body of water. But raw sewage should absolutely not be run into a fresh water stream or lake. What alternatives are there?

Intermittent sand filtration disposes of sewage satisfactorily and gives an effluent which can be turned safely into any stream, however small. Such a plant, though used extensively in small towns, is advisable for country houses only where the character of the soil or the topography makes it difficult to use one or the other method of irrigation—surface or subsoil—either of which is an ideal plan of disposal for nearly all isolated houses.

In surface irrigation the sewage is simply distributed over cultivated land, where it is rapidly absorbed and the filth disposed of by the numerous bacteria of the soil. house-sewage is here first sent to a settling tank, or rather an intercepting chamber, where the solid material is decomposed and macerated into very small particles; from this the liquid passes into a flush-tank, whence it is discharged by an automatic siphon into surface-gutters, and from these allowed to spread over the ground or run into furrows between growing vegetables or grain. The intermittent flow of sewage, which is brought about by the use of the siphon, is desirable, especially in winter.

Such surface disposal of sewage is perfectly satisfactory and creates no nuisance. Yet where the location is not suitable subsurface irrigation might be more desirable. In this latter case the house arrangements are the same as for a surface plant except that the foul liquid, after leaving the flushtank, flows into open-jointed drain-tiles laid under the ground and within 8 to 10 inches of the surface. This last is important because the filth destroying bacteria are vastly

The Sanitation of a Country House, by John Wiley & Sons.

more numerous near the surface. For such a plant the flush-tank should have a 50 gallon capacity for each person and in good absorptive soil about 100 feet of 2 inch tile for each 50 gallons capacity of tank.

There is a still simpler and cheaper method, provided land is abundant and the house isolated; in this the settling- and flush-tanks are eliminated and the sewage is turned directly from the house to the land, flowing from the sewer into shallow trenches, between which corn, vegetables or trees may be planted. In order not to overtask the land at any one place the trenches should permit of being blocked at various points so as to divert the sewage into different trenches. A wintry climate does not interfere with the working of these various sewage forms, for the sewage, more or less warm, readily cuts its way through snow and ice, and gradually filters through the soil beneath.

With the sewage disposed of, there yet remain such other waste products, as kitchen garbage, rubbish and ashes. These latter are easily disposed of if the various kinds are separated when collected. There should be a series of receptacles for the different materials and a certain place for each. The paper, rags, rubbish and the like, for which flour-sacks, supported by iron racks, are used, might be still further subdivided. Or the receptacles might be arranged in one place, instead of being scattered here and there about the premises; an accessible place is in a large box containing the necessary number of compartments at the rear of the house, near the kitchen door.

As to the ultimate disposal of household waste: The garbage is best put into a shallow furrow in a field and "earth burned"preferably in the vegetable bed. Every evening the garbage should be covered with earth. Besides this a tight board lid should cover the hole during the summer months else the place may become a breeding place for flies and become an abominable nuisance. Screening the hole will not suffice; for fruit flies will creep through a screen of the smallest mesh and breed in the garbage. Noncombustible stuff (bottles, tin cans, scraps of metal can be sold to junk dealers; and unsalable combustibles should be destroyed by fire. Ashes can be used in almost any place for filling, making paths, or for a foundation under pavements—nothing better for such purposes.

Come we now to country houses of the smaller kind, where a sewerage system is not available. For such we have to adopt the "dry" method of excreta-disposal. This calls for a galvanized-iron pail and a seat exactly like that of an ordinary water closet.

At the side of the seat is a box for holding some such absorbent as sifted coal-ashes or dry earth, which are put on the excreta. When the pail is filled it is emptied on cultivated land—a field or a vegetable-bed. If the pail is emptied near the house a little earth should be raked over the pile; and in a short time (a week or two in summer, with corresponding increase in cold weather) all evidence of filth will have disappeared. Such a "dry" closet system is,

if properly conducted, cleanly, inodorous and sanitary. When this "dry" method is used waste waters from the bath and kitchen sink can be disposed of by some form of surface drain. For example, a six-inch galvanized gutter pierced every twelve inches by one-fourth inch holes. This allows the filthy water to be distributed evenly over the ground without forming puddles and mud holes. We dispose of garbage, ashes and rubbish as above stated.

A vegetable-bed has very considerable waste-destroying properties. Such a bed, 16 by 20 feet, has for ten years received all the waste, of every kind, of a family of four; and has destroyed all this filth without offense to sight or smell, and has besides made the bed one of exceeding fertility.

MANURE.

THE value of this fertilizer is not sufficiently appreciated. The droppings of animals in city streets should be saved for the agriculturist, instead of being dumped into the sea. Manure represents the waste material of the food that has grown on the land; and it should be returned to the land to supply the elements used by the growing vegetation. Any other method of manure disposal tends to rob the soil of its fertility.

In the rural districts, states Dr. I. M. Brewer,* most of the manure is returned to the land. But very often it is handled in such a way that there is an unnecessary loss of fertilizer. Scientific agriculturists find that the sooner the manure is got on the land the better; and there will be less loss. The farmer's best interests are served by the sanitary management of manure. Some method of storage must be provided for that portion of the year when it cannot be spread on the land.

*Rural Hygiene (Lippincott's, Phila.).

Manure in storage loses its value through: (1) Fermentation, whereby a certain amount of the nitrogen is lost; (2) Weathering and bleaching, which causes a loss of soluble constituents, such as phosphates and potash. To prevent these losses the manure should be stored in sheds with cement floors, or, better, in cement-lined pits; both pits and sheds must be fly-proof. If litter to the extent of one-third of the dry food consumed by the animal be used, the urine will be absorbed. Keeping the pile moist will delay the fermentation. Preservatives have not proven satisfactory. The pile should be as compact as possible. How manage manure? (1) Place it on the land as soon as possible; (2) spread it uniformly; (3) keep the air out as much as possible; (4) keep it moist but not wet; (5) protect it from extremes of heat or cold. Fowl produce much manure which, if not properly attended to (at least once a week) will become the breeding places of flies; and a daily cleaning of the hen-house will insure better health among fowls.

A man is soon forgotten after he is dead, unless you happen to marry his widow.

Many a good man is too busy reading the Bible to help his wife carry up the coal.

Many a girl goes abroad to have her imagination cultivated, under the impression that it's her voice.

A BUNCO GAME.

"'Ma! Ma!' Willie sobbed. 'Do my ears belong to my neck or my face?' 'Why, what is the matter?' was the temporizing reply. 'Well, you told Mary to wash my face, and she's washing my ears too.'"—Outlook.

CO-OPERATION IN PUBLIC HEALTH WORK.

THE April World's Work tells of how seven Massachusetts towns co-operate to get an efficient public health service that no one of them could afford to pay for by itself. A year ago Wellesley, Framingham, Weston, Needham, Melrose, Winchester and Canton abandoned all or part of their other resources of medical inspection and put this work in the hands of a central organization under Professor Phelps, who was then giving a course in sanitation at the Massachusetts Institute of Technology.

In this seven-town organization are engaged an administrative officer, a chemist and bacteriologist, a plumbing and sanitary inspector and a corps of assistants. These men are responsible for all the public health work in some of these towns and for milk inspection only in others. Their central office and laboratory are at Wellesley, but they have regular office hours which they keep in each of the towns, and they main-

tain stations at strategic points from which they distribute antitoxin and virus for vaccination. Diagnoses of diphtheria, typhoid fever and other infectious diseases are reported by telephone.

Altogether, the public interest in the health of 55,000 people is guarded by this organization. 30,000 of these people have the complete service; the rest, only milk inspection. The total cost is \$6,300 a year—12 cents (about the price of a quart of milk) the individual; and this pays for highly trained experts. These seven enterprising towns have as good a department of public health as large cities have.

This plan is being operated under exceptionally favorable conditions in Massachusetts; but with the rapid increase in the number of men trained especially for sanitary work there is no reason why other towns and rural communities should not do likewise. It is co-operation as to one of the most vital of human needs.

THE COUNTRY "WAITING ROOM."

Every one who goes about at all in outof-the-way places—in suburban regions and country districts-must have had the experience of drifting into so-called waitingrooms along railways or trolley lines, cal-culated to "turn the stomach" of a wellbred pig-unventilated, dirty, offensive, in fact, to all the senses, an outrage upon decency and a menace to public health. Usually in charge of ignorant and unsupervised care-takers, there is not even a semblance of sanitation. That these places, particularly in cold weather, when waiting passengers crowd into them in large nun: bers, are fertile sources of disease there is every reason to believe. There is absolutely no excuse for their continued existence in this age of sanitary awakening. They have persisted simply because it has been nobody's business to abate them. It is very much to be hoped that when the State Department of Health takes hold of village and town sanitation, as it should have done long ago, this question of wholesome waiting-rooms will be one of its first points of attack.—Dr. Youmans in the N. Y. Evening Post.

FROM AN AFTER-DINNER SPEECH

By SIMEON FORD.

Last year I was not with you. The very day you had your legs stretched under Boldt's mahogany, my leg was being pulled by a high-priced surgeon up at St. Luke's. While you were seated at tables groaning with good things, I was a good thing groaning on an operating table. Those of you who have never had occasion to part with any of your vital organs have no idea how embarrassing it is to a shy man, to be strapped on a table, en dishabille, surrounded by cute little trained nurses, gazing at you scornfully, while a surgeon with a glittering eye and a sharp cleaver prepares to explore your interior.

It was a great comfort to me, however, to realize that I had led a blameless life and never charged the public for bread and butter, or for hanging up their hats and coats, and had always transferred baggage from the Grand Central Station to my hotel free, and had never encouraged turkey trotting with victuals.

A DIVISION OF RURAL HYGIENE.

RURAL DISTRICTS CALL FOR HEALTH PROTECTION.

The following letter was sent out under date of February 14, 1914, from the secretary's office of the New York State Grange at Skaneateles to the officers of the local granges throughout the State:

"The time has arrived when we residents of rural New York should demand as careful attention to community health problems as is devoted to the health of our cities. In the last nine years the death rate in rural New York (all communities under 8,000 classed as rural) has increased from 15.2 per 1,000 to 15.4 per 1,000 while the rate in New York City has fallen steadily in that time from 20.1 to 13.7.

"If the death rate had been as low in rural New York as in the metropolis last year it would have meant the saving of more than 3,000 human lives! This means that, at the very low estimate of \$5,000 as the value of a life, we lost in the country districts more than \$15,000,000 last year and lost it needlessly!

"We are enclosing herewith for the consideration of your grange, a printed copy of the resolution adopted by the State Grange in Poughkeepsie on February 6, 1914, calling attention to these facts and demanding that the State Department of Health establish a Division of Rural Hygiene. This will give us some of the public health protection in rural New York which has so long been given to the residents of the cities.

"We are also enclosing a suggested resolution on the same subject which we trust you will present to your grange and urge that it be adopted. If this resolution or a similar one is adopted, it is highly important that the Legislature be informed of your action."

RESOLUTION ADOPTED BY STATE GRANGE.

"Resolution demanding a Rural Hygiene Division in the State Department of Health, adopted by the State Grange in session at Poughkeepsie on Thursday, February 5, 1914.

"WHEREAS: The death rate of Rural New York State is higher than that in New York City, and is increasing, while the death rate in the metropolis is falling and has been falling for the past nine years, and

"Whereas: The rural section of the State by reason of its many natural advantages should be, and can be, healthier than the cities, with their congested living conditions, and

"WHEREAS: If the death rate in rural New York last year had been as low as that in New York City, rural New York would to-day be the richer by more than 3,000 human lives, therefore be it

"Resolved: That the State Grange reaffirm its approval of those measures for the prevention of disease, such as tuberculosis hospitals and public health nurses, which the grange has repeatedly approved and, through its tuberculosis committee, has consistently worked for, and be it further

"Resolved: That we wish to register herewith our emphatic protest against the continuance of conditions in rural New York State which permit a loss of 3,000 human lives that could have been saved if measures for the prevention of disease adopted in the metropolis were to be put in operation in the country, and be it further

"Resolved: That the Grange continue its public health work on broader lines than in the past and that the tuberculosis committee be renamed the Public Health Committee and further, that the said Public Health Committee cooperate with all existing agencies in urging upon the Governor, the Legislature, the State Department of Health, and all local boards and officials the importance of devoting the best efforts of the State to the conservation of human life in our rural districts and that the said committee be instructed to wait upon the Commissioner of Health at the earliest possible moment to urge the importance of an intensive study of rural health conditions and the necessity for the best effort the Department can put forth in remedying all possible defects in rural sanitation and hygiene and rural public health administration."

THE STATE DEPARTMENT OF HEALTH READY TO DO ITS PART

Commissioner Biggs, in commenting on a statement issued by the U. S. Bureau of Census showing the total deaths and death rates in the various registration States, said:

"That New York State should have a higher death rate than any other State in the registration area excepting Maryland, which has a large colored population, is convincing proof that our State has been very negligent in the past in providing the necessary legislation and appropriations to properly protect the lives and health of its citizens.

"The 1910 U. S. Census shows that the population of New York State is made up of as large a per cent of persons under the age of 45 as that of our adjoining states, and the per cent of the population in ages 45 and over is less than that of Massachusetts, Vermont and Ohio, and but one per cent above that of Pennsylvania and New Jersey.

"While there has been a steady decrease in the urban death rate since 1904, the rural death rate has been on the increase, and since 1910 exceeded the urban rate.

"The rural districts have failed to realize the great importance of improved sanitation, and very little progress has been made in the rural districts in improving local sanitary conditions as compared with the great advancement in our cities.

"The State should inaugurate an active campaign to educate our rural population as to the benefits to be gained by making use of modern sanitary knowledge. This is why I am so anxious to establish in the State Department of Health a Division of Rural Hygiene. The urban death rate last year was 14.5 per 100,000 population and the rural 15.4. The City of New York with its great congested population made up largely of people coming from the rural districts of foreign lands where little knowledge of sanitation exists, had a death rate of but 13.5. Had this rate prevailed throughout the State the total deaths in the State would have been 133,475 instead of 145,054, which would have meant a saving of 11,579 lives.

"While it is not expected that this great saving of lives can be accomplished in a short time, there is no reason why, with sufficient funds to establish and maintain an active and efficient Division of Rural Hygiene, the State Department of Health can not save thousands of lives that are lost each year by preventable diseases.

"The rural death rate from general diseases, typhoid fever, malaria and diarrhea and enteritis is greatly in excess of that in the urban districts.

"The infant mortality in our districts shows a wanton loss of life, while the health authorities of our cities are succeeding in reducing the death rate of infants under 1 year of age and from 1 to 5 years, by improved water and milk supplies and the establishment of infant welfare stations and visiting nurses, no special effort is being made in our rural districts to 'save the baby.' The average mortality of children under 1 year of age in New York State during the past ten years has been 26,080, and under 5 years of age, 37,873.

"While the general death rate of the State last year, as a whole, was nearly the same as during 1912, we find that the mortality of infants in the rural districts increased from 100 per 1,000 living births in 1912 to 111 in 1913. There was a reduction in the cities of the State from 111 to 109.

"The number of deaths under 1 year of age per 100 deaths at all ages increased from 12 to 13 in the rural districts, while it dropped from 20 to 18 in the urban districts.

"The high death rate in some of our cities also shows the need of greater work on the part of the local health authorities to improve local sanitary conditions.

"The wisdom of placing upon our statute books health legislation which gives the State Department supervision over the work of local health administrations, and the creation of a Public Health Council with power to enact a State-wide sanitary code, is sure to result in great benefit to the citizens of our State."—From the Monthly Bulletin of the New York State Department on Health.

THE TEN COMMANDMENTS OF GOOD CITIZENSHIP.

- I. Thou shalt honor thy city and keep its laws.
- II. Remember thy cleaning day and keep it wholly.
- III. Thou shalt love and cherish thy children and provide for them decent homes and playgrounds.
- IV. Thou shalt not keep thy windows closed day or night.
- V. Thou shalt keep in order thy alley, thy back-yard, thy hall and stairway.
- VI. Thou shalt not kill thy neighbor's bodies with poisonous air, nor their souls with bad companions.

- VII. Thou shalt not let the wicked fly live.
- VIII. Thou shalt not steal thy children's right to happiness from them.
- IX. Thou shalt bear witness against thy neighbor's rubbish heap.
- X. Thou shalt covet all the air and sunshine thou canst obtain.

The greatest menace to health in a city is the influential citizen who insists on his right to live like a dog and be a menace and a nuisance to all his neighbors.—Bulletin of the Indiana State Board of Health.

IT HAPPENED IN CAPE COD.

You might go meeting men from sunup to nightfall, the twenty-fist day of June, and not find anyone better natured, or truer hearted, or more loval than Tom Strong. There are hundreds of things to prove this. For instance, when Bill Williams was in hard luck they got up a paper, so as Bill could own a horse and support his family by peddling tea throughout the Cape for a Boston company; and of course they took it first to Tom; who headed it with five Most every paper like that was dollars. taken first to Tom; he was sure to give most, though he wasn't any capitalist; and others would be ashamed to go very much under. And Tom's idea was always known to be: "Of course we can't let any one of our people want for anything." Besides, Tom being a bachelor, it was taken for granted he could do for others more than a family man could do; anyway he generally did. Well, Tom had been suffering off and on nigh onto two years, getting thinner and thinner and weaker and weaker; but he bothered no one about it. Until one day he vomited blood; lay there helpless until a boy, coming in to buy something, ran out frightened and told the neighbors. Then they put him on a cot in the back of the store, where he kept vomiting red, until it was hard to believe there was another drop of blood in his body. The doctor wouldn't be sure he had more than half a day to live; but somehow he did get Tom around so as he didn't die, though for weeks he kept betwixt and between; and it was months before he could get out of bed. Then he took to going about, though the doctor told him he had no business to; the first few rods he walked made him feel fit to drop, about like a codfish stood on its tail and left without support. Besides the stomach ulcer that the bleeding came from, the doctor found that Tom's lungs were far from what they ought to be; and that his heart was wabbly too.

But that six months on his back had pretty nearly cleaned out Tom's bank account; besides he had to sell a cranberry

bog, and some little patches of ground that he owned to meet the heavy expenses of the sickness. You'd have thought the neighbors would now just naturally get up a paper for Tom. But no one seems to have thought anything about it. Anyway, nobody made a move for it, possibly sensing that Tom wouldn't stand for it if they had. It wouldn't have made any difference at all to Tom if his little journey here had ended with those hemorrhages; but now one thing kept sticking in his crazy crop—that he couldn't afford to die owing any man a cent. So he just used up every ounce of strength he had crawling about the country getting orders, and trying to rebuild his grocery business. And among other things he asked a man who had borrowed a lot of money from him for payment of the debt. The man couldn't pay him in money, but he gave him instead a pool table worth about a quarter of what he owed. So Tom had this pool table put up in the rear of his store. And here his friends-straight honest fellows; for although he knew pretty nearly everybody, he wasn't really friendly with any other kind—here his friends congregated of evenings to spend half an hour or so playing pool. Tom made no charges for the pool, although when they dropped in, besides playing pool or looking at the game they were likely at the same time to buy things that were needed at home. And there were no drinks, of course; for besides this being a no license village Tom wouldn't have stood for whiskey anyway. Yes, there were "tonics," when anyone had a mind for them —ginger, sasaparilla, root beer and things like that; with ice cream Friday and Saturday evenings And so, around this pool table there was nothing more wicked going on than geniality, good fellowship, wholesome entertainment and mutual consideration; especially for Tom. And the game itself? How was it different from croquet, or quoits, or checkers or anything like that? And what a contrast was Tom's store with the other grocer's, where the village post office was! The women folks going for their

mail and such like were in constant danger of annoyance from the village loafers congregated about the entrance. And not infrequently there were scraps around that place that would have made a city mill seem like a game of ping pong. Yes, the owner of that store was a pillar of the church; but anyone spiritually minded in a queerish way might any time find some middling hard cider in the rear of that post office grocery!

Now, what disheartened Tom Strong more than anything else he had been up against since his trouble began was, that Miss Amy Jenkins, who kept summer boarders, so many of them there had to be tents to accommodate the overflow—and got a dollar for dinner from transient the food of which couldn't have cost her much more than a dime; and who had for many years previously got all her groceries from Tom—yes, as much as fifty dollars a season. Miss Amy now refused to deal any longer with Tom, and turned all of her

trade over to the post office grocery. Why? Because she belonged to the church; and so wouldn't abide a pool room nor any man that kept one! And that was funny too; because young Si Turner, Miss Jenkins's nephew (that lived with her) was to be found several nights a week in Tom's place. And a mighty good place it was for him to be into and he could easily have been about worse things than playing pool there.

about worse things than playing pool there. Now, it doesn't seem Tom took it so hard on account of the money, although he needed that badly enough too. But he had been friendly with Miss Amy through many years; and they do say that in his twenties he had made up to her and had been jilted. And what's more, that his luck might have been different if he had tried twice. And then again (some mean people thought) it isn't always easy to tell when a man is really in luck and when he isn't.

But the point is, that all this is a puzzle story; the puzzle being to find the most Christian character in it.

STANZAS.

Where forlorn sunsets flare and fade On desolate sea and lonely sand, Out of the silence and the shade What is the voice of strange command Calling you still, as friend calls friend With love that cannot brook delay, To rise and follow the ways that wend Over the hills and far away?

Hark to the city, street on street
A roaring reach of death and life,
Of vortices that clash and fleet
And ruin in appointed strife;
Hark to it calling, calling clear,
Calling until you cannot stay,
From dearer things than your own most
dear
Over the hills and far away.

Out of the sound of the ebb and flow, Out of the sight of lamp and star, It calls you where the good winds blow, And the unchanging meadows are; From faded hopes and hopes agleam, It calls you, calls you night and day Beyond the dark, into the dream Over the hills and far away.

-W. E. Henley.

It is related that one day a man came to Lincoln with a sad tale. His son had been sentenced to death, an only son, too. Lincoln said kindly:

"I am sorry I can do nothing for you. Listen to this telegram I received from General Butler yesterday," and he read the following:

"President Lincoln: I pray you not to interfere with the courts-martial of the army. You will destroy all discipline among our soldiers."

Lincoln watched the old man's grief for a minute, and then exclaimed:

"By jingo! Butler or no Butler, here goes!"

Then he wrote:

"Job White is not to be shot until further orders from me."

"Why," said the old man sadly, "I thought it was a pardon. You may order him shot next week."

"My old friend," replied Lincoln, "I see you are not very well acquainted with me. If your son never dies till orders come from me to shoot him, he will live to be a great deal older than Methuselah."

MY OLD NURSERY CHAIR. LUCRETIA MARSHALL HUBER.

The nursery blinds are drawn down tight, Whilst all outside is shining bright; And I must take my mid-day rest, Lying soft on nursie's breast.

Nursie rocks me forth and back, And I hear the old chair crack; Crickety crack, crickety crack, Like a steam car on its track.

Up upon the ceiling high Golden spots of sunlight lie; Distant "moos" and nearby bees Murmur on the scented breeze.

Nursie's voice sounds soft and low Humming songs of long ago; 'Seems the room is growing black; Through dreams' vistas sounds come back; Crickety crack, crickety crack.

A CRADLE SONG.

Sing it, Mother! sing it low: Deem it not an idle lay. In the heart 'twill ebb and flow All the life-long way.

Sing it, Mother! softly sing, While he slumbers on thy knee; All that after-years may bring Shall flow back to thee.

Sing it, Mother, Love is strong! When the tears of manhood fall, Echoes of thy cradle-song Shall its peace recall.

Sing it, Mother! when his ear Catches first the Voice Divine, Dying, he may smile to hear What he deemeth thine.

-John B. Tabb.

AN EXPLODED MYTH.

UNCLE JACK—"I understand the angels brought you a little brother last night."

Small Bobby (pityingly)—"You'd better come over to school to-morrow and join our class in sex hygiene."

THE NEW BABIES' FAIRY.

By Louise Von Wetter.

The New Babies' Fairy leaned over the pillows,

To whisper her gift to my child.

She thought I was sleeping, my travail just ended—

So faintly I breathed as she smiled.

"Oh, Hope of True Lovers, who longed for thy coming,"

(How gently she touched the wee head!)
"I bring thee a treasure far greater than jewels;

A wholesome sweet spirit," she said.

And lo, she had vanished—the rainbow-winged Fairy,

No humming bird's flight swift as this. While I held my baby, and lay amid flowers

And dreamed of my True Love's first kiss.

MOTHER O' MINE.

(Kipling)

If I were hanged on the highest hill, I know whose love would follow me still:

Mother o' mine.

If I were drowned in the deepest sea,
I know whose tears would come down to

Mother o' mine.

If I were damned of body and soul,
I know whose prayers would make me
whole:

Mother o' mine.

THE CHILD MIND.

"What is mamma?" Here are nine answers given to that question by children at the Children's Aid Society's school in West Fifty-third Street:

She's what you chop wood for.
She's what feeds you.
She's what put clothes and shoes
on you.
She keeps care of you.
She's who's good to you.
She's your creator.
She's what's dead on to me.
She's a boy's or a girl's mother.

BOOK REVIEWS.

RURAL HYGIENE, by Henry N. Ogden, C.E.,
Professor of Sanitary Engineering in
College of Civil Engineering, Cornell
University; Special Assistant Engineer, New York State Department of
Ilealth; pp. 434, 77 illustrations. New
York, The Macmillan Company.

Time most excellent book represents "an attempt to put before the rural population a systematic treatment of those special subjects included in what is popularly known as Hygiene as well as those broader subjects that concern the general health of the community at large." We find the modest author's "attempt" to be fully realized; the work is veritably encyclopedic on the subject. Of course it is authoritative, being that of a very experienced teacher and consultant. That it is not all "dryasdust," but written with uncommon literary charm may be judged from this extract: "It is commonly supposed that good health is the invariable accompaniment of country life; that children who are brought up in the country are always rosy-cheeked, chubby, and except for occasional colds, free from disease; that adults, both men and women, are strong to labor, like the oxen of the Psalmist, and that grandfathers and grandmothers are so common and so ablebodied that in practically every farmhouse the daily chores are assigned to those aged exponents of strong constitutions and healthy lives." Prof. Ogden proves this supposition to be erroneous. The book is of the first importance with respect to rural sanitation.

RURAL HYGIENE. A handbook of sanitation designed for the use of students in the agricultural schools and colleges, and for the residents of the rural districts of the United States, by Isaac Williams Brewer, M.D. 22 illustrations; 2nd edition; Philadelphia and London, J. B. Lippincott Co.

This superb and most recommendable book treats admirably and adequately of such subjects as Work and Recreation, Dwellings, Schools, Water, Excreta, Disposal, Food and Diet, Milk, Ice, and Contagious Diseases (certain of which have a higher mortality in the country than in the city). The chapter on Alcoholism demonstrates this evil to be by no means only an urban one.

THE MILK QUESTION, by M. J. Rosenau, Professor of Preventive Medicine and Hygiene in the Harvard Medical School. Formerly Director of the Hygienic Laboratory, U. S. Public Health and Marine Hospital Service, Washington, D. C. Boston and New York, Houghton, Mifflin Company.

This exhaustive work on a subject of the most vital importance is appropriately dedicated To Nathan Straus, whose generous efforts to assure infants and children pure milk are not yet universally appreciated. The hand of the master is shown in every page of Prof. Rosenau's book. Here is a vade mecum for the farmer and the dairyman; and the consumer may find in these pages what he may be up against. The book is abundantly illustrated. The subjects emphasized are, Milk as a Food, Dirty Milk, Diseases Caused by Infected Milk, Clean Milk, Pasteurization, Infant Mortality, From Farm to Consumer.

EXPECTANT MOTHERHOOD: ITS SUPERVISION AND HYGIENE, by J. W. Ballantyne, M.D., F.R.C.P., Physician to the Royal Maternity Hospital, Edinburgh; Author of "Manual of Antenatal Pathology and Hygiene," etc. Large 12mo. 288 pages. Price, \$1.50, net; by mail, \$1.61. Funk & Wagnalls Company, publishers, New York.

"A new discovery calls for a new commandment," is the principle upon which this book is based. By the "new commandment" is meant the hygienic rules which the parents, and especially the mother, must obey if the child is to come into the world well and strong. Dr. Ballantyne, as physician to the Royal Maternity Hospital, Edinburgh, is able to write on this subject with authority. He not only tells the expectant mother what she ought to do and ought not to do, but with singular clearness and charm explains the physiological reasons for the directions he gives. In this respect the book is unique. The expectant mother, he holds, has the right to know more than she has hitherto been expected to know about those secret and silent processes of nature which mean so much to her and to her child.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M. D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

A GOOD SPRING TONIC.

No man who has once heartily and wholly laughed can be altogether irreclaimably bad. How much lies in Laughter; the cipher-key, wherewith we decipher the whole man! Some men wear an everlasting barren simper; in the smile of others lies a cold glitter as of ice: the fewest are able to laugh, what can be called laughing, but only sniff and

titter and snigger from the throat outwards; or at best, produce some whiffling husky cachinnation, as if they were laughing through wool: of none such comes good. The man who cannot laugh is not only fit for treasons, stratagems, and spoils; but his whole life is already a treason and a stratagem.—Thomas Carlyle.

VACATION HINTS.

FORTUNATE indeed is the worker who can round out a year of toil by a few days of rest and recreation. For this pleasure there is no time like the late Spring or Summer. By all means, plan your vacation early and take time enough to choose deliberately the places that you wish to visit, for a well-planned outing brings a double satisfaction—both the prospect and the realization.

In planning your trip you must remember that the vacation has its perils as well as its pleasures and that some, at least, of these perils may be avoided by proper forethought. Many a pleasure seeker has his play-spell cut short by an attack of typhoid, presented him, we might almost say, with the compliments of his host, the inn-keeper or the proprietor of the high class boardinghouse. From the viewpoint of the sanitarian these proprietors of typhoid traps are planning for another "run" of their special disease just as deliberately as they are planning for their season's trade. Any hotel or other affair for harboring summer boarders, which does not eliminate from its premises the unsanitary, open privy, the polluted well or other source of water, and every known means of encouraging the presence of house flies—every such place is inviting you to a feast of filth and a bed of misery. No matter what "natural advantages" your chosen resort may present to your tired eyes, if you find there the

abominations that have just been mentioned, cancel your contract and get away just as you would get away from a house that is placarded for a contagious disease.

It seems unnecessary to tell people anything more about the danger of harboring the house fly; and yet, you will see many a home this summer tormented and tortured by this commonest of all pests. It is strange, indeed, that all people have not adopted the fly trap as the most sanitary and certain means of clearing our premises of flies. How much longer must civilized communities wait before they take the most elementary steps toward sanitary living, by abolishing from their homes these flying, crawling carriers of disease and filth? It can be done, and is done by those with gumption.

If you are in a position where you are able to fight the flies and protect yourself and your food from their visitation we recommend the plan of campaign outlined in the *Chicago Sanitary Bulletin*, always remembering that the *trap* is the most dependable instrument that you have:

TO FIGHT THE FLY.

Swat the breeding places. Sprinkle kerosene over the garbage daily; sprinkle Paris Green solution over stable manure every day; use an abundance of chlorid of lime in the privy vault and pour kerosene down the drains occasionally.

To fight the existing flies, screen your doors and windows, use sticky papers, traps and

keep dishes of the following solution-fly Water 1 teacupful
Formaldehyd 1 tablespoonful

been placed, always keeping surplus of liquid in saucer. The bluing is added to give a color which will deter adults from drinking the solution. Keep out of reach of children.

Fortunately for the prudent pleasureseeker, the idea has pervaded most resorts that it is a good thing to drink wholesome Most of the places which attract large crowds of visitors possess one or more sources of decent water which have passed a favorable analysis. And yet, and always, it well behooves the visitor to be on his guard and take no chances when the drinking water is not above suspicion. Boiling will make almost any drinking water wholesome. Those who are camping or roughing it sometimes want some better means of purifying water, especially if they are without any way of cooling it quickly. Here is a good method of applying the hypochlorite treatment, for which we again thank the Bulletin:

TO PURIFY DRINKING WATER.

(Paste this in your traveling bag)

Get a few ounces of the best quality of chloride of lime at any drug store and prepare the following

STOCK SOLUTION

				teaspoonful
Water	 	 	 1	quart

Keep this solution in a tightly stoppered bottle; a mason jar or a thermos bottle being well adapted to the purposes, the latter especially when traveling.

Label the bottle "Stock Solution;" show

formula as above and add the following di-

To purify water for drinking purposes add one teaspoonful of the stock solution to two (2) gallons of water.

If the water is turbid strain it through fine muslin before adding any of the stock solu-

After adding stock solution allow the water prepared for drinking purposes to stand uncovered for twenty minutes before using. This allows the gases to escape and makes the water more palatable.

Then bottle the prepared water and keep

on ice. Never put ice in the water.

Another source of water-borne infections, common to many resorts, is the bathing beach with its nearby sewer outfall. Be sure that the waters you swim in are not fouled with human wastes.

MISS TUFTS' ARTICLE on vacations for nurses, which we are happy to present to our readers this month, makes many very useful suggestions to those who like the wilder and more primitive kind of an outing. We hope that it may inspire some of our readers to get near to nature before this summer is over. And we hope, too, that our own suggestions may serve to make the vacation more enjoyable by reducing the wear and tear that come from all night combats with insect foes and daily conflicts with flies and the filth that they bear with them. If your fight happens to be with mosquitoes, try the tactics which Uncle Sam suggests.

TO PROTECT FROM MOSQUITOES.

In a Bulletin issued by the United States Department of Agriculture, it is said that the most effective mixture was that sent the Department by C. A. Nash, of New York. It was as follows:

Spirit of camphor.....oz. 1
Oil of cedar.....oz. 1/2
A few drops of this mixture on a bath towel hung over the head of the bed will keep the common house mosquitoes away. When they are very abundant and persistent, a few drops may be rubbed on the hands and face. Towards morning, it may lose its efficiency, and as the mosquito often bites worse about daylight, when the individual sleeps soundest, it is well to renew the application during the night.

TRAIN TWO CLASSES OF ATTENDANTS.

EVERYBODY knows that there are at least two classes of nurses at work to-day. Why not give them both "official" recognition, since both are in possession of a good business, and help both of them to progress along normal lines of growth? Here is a hint for the hospitals by Leonard Felix Fuld, Examiner Municipal Civil Service Commis-

sion, New York City. We quote from the International Hospital Record:

Under the present system undergraduate nurses are not subjected to civil service examinations at all, because it is presumed that the statutory regulations regarding the edu-cational qualifications and the ability of a competent superintendent of a training-school will accomplish better results than the impersonal machinery of the civil service law. When the superintendent is a thoroughly competent administrative officer this system works reasonably well. As a layman, however, I venture the suggestion that the hospitals are not performing their full duty to the community when they train only the highly skilled nurses who are graduated at the present day. Nurses possessing the preliminary educational qualifications demanded by our statutes and the technical qualifications required of them before graduation from the training-school generally demand a fee for their services which the poor man is unable to pay, and which it is a hardship for the man of the middle class to pay. The hospitals should train two classes of attendants for the care of the sick: trained nurses,

possessing all the qualifications possessed by trained nurses of the present day, and trained attendants, who lack some of the preliminary educational qualifications and some of the higher technical skill of the trained nurse. In this way they could furnish attendants who have been trained in a hospital and who could do much to improve the condition of those members of the community who, when sick, are unable to command the services of a trained nurse. During their course of training in the hospital, these attendants will be able to assist the trained nurses; and, after their graduation, they will be able to extend the benefit of trained attendance on the sick to those who are wholly unable, or unable without serious hardship, to employ and pay the regular trained nurse.

THE PROPOSED PROTECTION OF THE WORD NURSE.

WHILE the Seeley Bill for the amendment of the Nurse Practice Act in New York State has failed to pass the Legislature, the agitation in favor of "protecting" the good old word nurse continues to attract the attention of readers of authorized nursing literature. After this long and warm campaign with its luminous hearing at Albany, there still appears to be more to say in the way of argument and persuasion. The American Journal of Nursing in its last issue, gives a generous allowance of editorial space to these arguments, "because, whether New York carries its measures at this time, or not, the question is one that will come up in other states, and that must be before the nursing profession for many years until the word Nurse is absolutely protected." In other words, the Journal announces that the profession does not intend to let up on this campaign "until the word Nurse is absolutely protected." And so, the legislature that defeats this protective measure one year may look for another siege the year following!

We like this frank announcement better than some other features of the campaign just closing.

Facing this prospect we have no right as partisans to delay the settlement of this important question by ignoring or suppressing any of the arguments pro or con. Our only interest is that the right may prevail, for we believe that no question is settled until it is settled right. To this end we would have every interested reader of the GAZETTE fully posted by reading all the available arguments on both sides of the question. By all means read The American

Journal of Nursing—you will never find it presenting more than one side, and that the side of the official circles. Read also the little pamphlet which bears the seal of the New York State Nurses' Association and "Some reasons for the prois entitled: posed amendment to the Nurse Practice Act." We would also take the liberty of quoting from the American Journal the suggestion that those especially interested in legislation may obtain from Miss Littlefield, of the Homeopathic Hospital, Albany, N. Y., a copy of the brief prepared by John F. Farrell, counsel, of Brooklyn. This brief "is a sum-mary of legal opinions at the time the use of the word Physician was restricted to those who were educationally qualified to practice medicine." By all means, gentle reader, get these articles and study them. Haven't we given you a fair chance? But before your enthusiasm runs away with you be sure to acquaint yourself with the other side—for you know that every practical question has two sides and some are many-sided.

It seems to be the office of the GAZETTE to show up the other side, or sides, of this proposition—not because we are opposed to registration, for we have always advocated registration for all nurses. But while favoring registration we have always tried to remind the nursing profession that it is not and can never be a cure-all for the evils that beset the path of the educated nurse. The present campaign, with its nerve-racking contentions merely proves our point. See if it doesn't.

Ten years of State Registration in New

York have conferred on the select nurses of the State their exclusive right to the use of the title "Registered Nurse," denoted by the symbol R. N. Many nurses have availed themselves of this right. Many have not. Because of those who have not registered presumably, the Nurse Practice Act has failed to fulfil the predictions of its early advocates. A new remedy is proposed, said to be a sure cure for the evils resulting from the competition of unworthy women who can not register. This remedy is nothing less than the taking from these women of the name Nurse—the name by which they have always been known in common with all men and women who have special care of the sick. The word is about as old as the word Mother.

We now have the spectacle of the Registered Nurse, who has enjoyed her special privileges for ten years, asking the legislature to give her the monopoly of the word Nurse. This, we are told, is "the legal protection of the word Nurse."

While we are about it, let us "protect" the word Teacher, in the interests of the thousands of certificated teachers who are striving to raise the standards of their profession. Let us enact that no one who teaches anybody anything in the State of New York shall be allowed to do so as a "teacher" without first having secured from the proper authorities a license entitling him or her to the use of this protected term. Such a law ought to make all genuine teachers feel a lot better!

The protectors of the word are harking back to the days when our state legislatures, some of them, restricted the use of the word Physician to those possessing certain qualifications. So they did. This word lent itself easily to such protection, because it was not the common word by which practitioners were known. There are thousands of people in our large cities to-day who do not know what the word means. But will any one tell us when or where in this country the use of the word "Doctor" has been "protected" in the interest of the profession, the public, or anybody else? Doctor means almost anybody, from the cook in a loggingcamp to the D. D. in a cathedral. It is too broad a term to be "protected" in the interests of the medical profession, and the physicians were contented when they secured the exclusive right to use the title, Doctor of Medicine. Unless we are greatly mistaken, our friends, the nurses, will have to be satisfied with the distinction, Registered Nurse, fully "protected" by their own Nurse Practice Act.

Before leaving this subject, we propose to quote several articles bearing on this proposed "protection." The first is by the venerable Dr. A. Jacobi, of New York City, a man to whom the medical profession has accorded the profoundest respect for many years, a leader whose voice is always welcome in our medical councils. We quote from his letter in the New York Times of February 21.

UNIONISM IN NURSING.

To the Editor of The New York Times:

Senate Bill 207 regarding the use of the word "nurse" seems objectionable for a good many reasons. The exclusive use of the word "nurse" by a certain class of persons is contrary to the ruling of the dictionary of the English language. Webster's unabridged defines "nurse" as a "person, especially a woman, who has the care of the sick or infirm." That is why a special class of nurses or an association requires a distinguishing title. Their claims may be recognized, and no objection should be raised to their calling themselves "trained" or "registered" or otherwise. Such a title should then not be used by those nurses who are not entitled to use it by previous training in hospitals or sanatoria extending over protracted courses of instruction.

But this latter class of nurses proves very useful to those who cannot afford to pay large weekly wages. That class of patients is very large. Protracted cases of illness are apt to cause a financial ruin to families of small or moderate means. Their nurses must not be in danger of being prosecuted or persecuted by the New York State association of "trained nurses" who claim the right to examine and certify and prefer charges and recommend revocation of licenses.

By passing Bill 207 the Legislature will restrict the rights of our citizens, male and female, who would be deprived of their own rights and privileges in favor of a privileged class of high-priced nurses. The object of Bill 207 is the creation of a "union," with all its preposterous and detrimental prerogatives which, as our lawgivers know too well, are the stumbling block of an equable and legitimate development.

That "unionism" is the more unreasonable the more one considers the fact that the trained nurse owes her education to the generosity of the hospitals, both public and private, and to the gratuitous and unselfish prolonged practical and theoretical teaching of the doctors.

The American Journal of Nursing, in its editorial account of the hearing before the Public Health Committee at Albany, on Feb. 17, mentions among those who opposed the Bill, "a Miss Fiske who, though a college

graduate, spoke against education as desirable for the nurse." Having had some experience as an editor, we can't understand how the representative of the Journal happened to overlook the fact that Miss Annette Fiske, A. M., R. N., is a graduate of the famous Waltham Training School which has been commended highly by more than one State inspector in the Empire State, and that she is on the editorial staff of the News Letter, besides having written extensively on nursing topics. Of course it is natural for an inexperienced reporter to overlook such little details as this when fussed up over a "hearing"; but we are sorry that it happened in New York State, and although we are not exactly authorized, we make this little apology for the Journal.

We want to reprint an article which Miss Fiske contributed to the New York Evening Post for February 12. We are afraid readers of the Journal exclusively will not see it, although they may possibly take a peek at the GAZETTE. It is useful sometimes to get the views of some one outside of our own State of New York.

TRAINED NURSES AND THE PUBLIC.

There is a prospect, apparently, that a bill to confine the use of the term "nurse" to graduates of registered training schools for nurses will again come before the New York Legislature; although its professed object is the protection of the public against incompetent nursing, it is difficult to see where the protection comes in, especially as the term "registered nurse" is already legally confined to this very class of graduate nurses.

What is needed is not the restriction of the use of the general term "nurse," but a law that shall cover all the workers in the nursing field, giving each her status and enabling the public to know what grade of nursing service it is getting. Is the graduate nurse alone dangerous to the public, that the law regulates her work and training, but makes no attempt to regulate the activities of the lesser trained or wholly untrained nurses whom many are, for financial reasons, obliged to employ?

To be sure, it was claimed that the present law for the registration of nurses would close the correspondence schools, whose course is brief and largely, if not wholly, theoretical; but it is an interesting fact that the number of young women graduated from one of these schools alone was 3,000 in 1912, as against 200 in 1903, the time of the passage of the law.

The trouble with the nursing legislation in New York State is that it has not really been framed to protect the public, but to give power to a few nurses, the so-called "leaders," and to create an aristocracy of nurses. The present law, as passed, was a just one, making the requirements for reg-

istration twenty-one years of age, a good moral character, and two years in a training school maintaining "proper standards." Such requirements, if fairly interpreted, allowed sufficient leeway to admit of the inclusion of all graduate nurses in high standing and the exclusion of the incapable; but the term "proper standards" used in the law has now been defined in such a hard and fast manner that a prominent school, whose training both the inspectors of training schools in New York State have at different times praised as highly satisfactory, is to their regret (?), unable to register. Thus has the law been manipulated by the "leaders."

Nominally, the body which defines the requirements of the law is the Board of Regents of the University of the State of New York, a board composed wholly of men, only one of whom was, at last accounts, a doctor of medicine—the rest being doctors of philosophy, literature, and the like. Of course, such men have no practical knowledge of nursing, and must turn for advice to the nurse examiners, five nurses appointed by the New York State Nurses' Association from their own numbers. It is the influence of these women, or of the "leaders" through them, that is distinctly seen in the final interpretation of the law.

There are two stipulations in particular that work hardship to training schools and tend more to the injury than the protection of the public. The first is the educational requirement for the admission of probationers, the second the refusal to allow the sending out of pupil nurses before the third year of training and then only for three months.

In the New York educational requirement is one year of high school or its equivalent, and the "equivalent" is not left to the judgment of the superintendent who sees and talks with the applicant, but must be referred to the authorities at Albany. The difficulty with this requirement is that, owing to the great increase in the number and size of hospitals these last years, there are not sufficient applicants with this qualification, to say nothing of their being temperamentally fitted for nursing. Yet the "leaders," while admitting this fact, ignore the evident consequences, and are now demanding the adoption of the full high-school course as a requirement. In this they have the sympathy of the public because to the average lay mind a high-school education seems a reasonable requirement for the nurse. If it were possible, it would be. The only difficulty is that it is impossible at present.

Moreover, the personality of the nurse is an even more important factor than her education, and it is not always the more highly educated woman by any means who makes the best nurse. Other things being equal, the better educated woman will make the better nurse, but insisting on a higher educational standard than can be maintained in practice merely means a short supply of nurses in the hospitals, with overwork and slighted care of the sick; the shutting out of good schools, and competent graduates from registration, and the driving of good

material in the way of capable women of lesser education into the correspondence and other short-course schools, with the consequent loss of good material in the recognized schools.

As for the sending of the pupil outside the hospital on district or private work, the "leaders" profess to regard it merely as a means of making money for the hospital. It may be done in places with that in view, but its chief use is to accustom the pupil to work in the home before her graduation, to teach her tact in dealing with the family, and ingenuity in getting along without all the apparatus provided in the modern hospital, and to enable her to learn her weak points while she is still in training, and can remedy them. If she is sent out early enough in her training, say at the end of the first year—under careful supervision, of course—it prevents her becoming a purely hospital machine, and the patient is in no more danger from her ministrations than he would be in the hospital. She certainly should be less dangerous than the wholly untrained nurse. District nursing associations have already found experience in district nursing almost essential as a part of the training of the nurse, and the public will soon wake up to the need of the nurse having experience in private nursing while yet a pupil as a means of eliminating that too common bugbear, the hospital nurse.

Nursing legislation is not, or should not be, a matter of interest to nurses alone. It affects the public very vitally, and they should see that the laws and their enforcement do not rest wholly with a few interested nurses, but they themselves get representation through such capable members as doctors and hospital trustees.

Our next citation will be an editorial by Dr. A. L. Benedict, in the *Buffalo Medical Journal*. He also manifests a very genuine respect for the English language.

THE BILL TO RESTRICT THE USE OF THE TERM NURSE.

The essential point of criticism in this bill is that by forbidding any but a registered, hospital graduate to call herself a nurse, it is virtually legislation against the dictionary. The word nurse as a general designation for anyone caring for a child or sick or injured person is practically as old as the English language, in fact some centuries older than English understandable by one who speaks that language to-day. An equivalent word occurs in most languages, ancient as well as modern, having the same general sense, so that it may fairly be stated that the word nurse, as a general designation, dates back to the dawn of civilization.

It is difficult to state just when the conception of the trained nurse originated. It is commonly dated back to the experience of the Crimean War, but, on the one hand, some degree of formal training of nurses,

especially in sisterhoods, antedated this War by several centuries and, on the other hand, the trained nurse in the present sense, as a generally available aid to the physician and surgeon and as representative of a definite profession, did not arise till the seventies and eighties of the last century.

and eighties of the last century.

Sufficient time has elapsed, however, to produce a large, influential and capable body of active and retired trained nurses. The general requirements for the education, registration and legal control of this profession can now be best formulated by this pro-

fession for itself.

Objection to the bill in its present form is not an indication of prejudice for the untrained nurse, but fear that it will react to the detriment of the trained nurse. We doubt very much whether any court will rule that it is a legal offense to use a word in its accepted and long established sense. We feel very certain that no court will punish, to any sensible degree, anyone who calls herself a nurse, unless it can be clearly shown that she practiced deliberate deception by qualifying the word with such an adjective as "trained" or "hospital" or "registered." And we feel equally certain that any organized attempt to enforce the law will simply strengthen the opposition to the trained nurse. The contention that the laity do not understand the difference between a trained and an untrained nurse can scarcely be upheld.

Why not accept conditions as they exist, recognize that the trained nurse is alone susceptible of professional organization and development, and seek such legislative control of the noble profession of trained nurses, as their own experience dictates, letting the dictionary and the practical nurse alone?

THE REAL AIM OF THE BILL.

The Trained Nurse, editorially speaking, claims to have discovered the "real aim of the bill," and we hope the claim can be substantiated. At any rate, this magazine makes a number of very sensible observations, with one of which we close this instalment of comments on "protection."

The real aim of the bill would seem to be, as Dr. Herman Biggs implied, to make nursing an independent profession, something it can never be, in the very nature of things. But if such an object is desired, the way to reach it would be, not to forbid the use of the term nurse, but the performance of nursing service, which it has been particularly stipulated the law is not meant to do. We are surprised that this point has not been brought out more forcibly. No one knows better than those supporting the bill, that it is impossible as well as undesirable to try to prevent the nursing of the sick by any but registered nurses. There are not enough registered nurses to care for the sick in the homes, and nine-tenths of the people could not afford them if there were.

PLEASANT AND INEXPENSIVE VACATIONS FOR NURSES.

By Mary H. Tufts, Farmington, Maine.

WHEN the nurse gets time for a vacation, she needs above all things to have an entire change of scene, and to spend as much time as possible in the open air.

As a rule it is not wise for the nurse to accept entertainment from former patients, during her vacation. It is better for her to co-operate with a congenial party of nurses or other friends; each sharing their proportional part of the expense for the vacation.

A pleasure shared is a pleasure doubled; and if the members of such a party be perfectly congenial, such a co-operative vaca-

tion is most enjoyable.

As a rule, nurses do not feel financially able to spend the vacation at the expensive hotels or sporting-camps. But the place to which one proposes to go should be carefully investigated, to be sure that it is desirable, and meets the needs of the vacationists.

Certain things must be considered: the vacation place must be reasonably near a village and stores and post-office; for unless one is boarding at a farmhouse, hotel, or sporting-camp run on the hotel plan, one must usually walk to the nearest settlement for supplies and mail.

I know comparatively little about camps and cottages in States other than my own;

so I will write only of these.

However, "The Vacation Bureau,—New England Lines,—Room 796,—South Station, Boston, Mass.," will gladly furnish information in regard to all sorts of accommodations throughout New England, if one will apply to them by letter, and state just the locality and kind of accommodation which they desire, and about what price they wish to pay. This bureau will send attractive booklets containing much information as to traveling expenses from the large cities to different resorts, and prices for board, guide-service, and boat-rental, etc.

Very good farm-board may be obtained in my State for \$1. per day; and in some instances, if two share a room, may be obtained for less than that during the months of May and September. Some people who do not generally take boarders, may be prevailed upon to take two or three persons at the rate of \$5. per week.

There are some small boarding houses also, which charge but \$1. per day; but

unless one is to spend the vacation at the sea-shore, I would not recommend that kind of a vacation for the nurse.

One of the most ideal plans with which I am acquainted, is for a party to lease a camp or cottage, fitted up for housekeeping; and to share the expense, and housekeeping duties. I know that one may in this way have an inexpensive and very

happy vacation.

Many of the camps and cottages in this and other States, are run on the hotel plan, i. e., the campers have rooms or a whole camp to themselves, according to size of the party; and get their meals at a large main-camp. The prices at such camps range from \$2. to \$4. per day; services of a guide cost from \$2.50 to \$7. per day, and sometimes at these prices, they will furnish a boat, and part of the equipment for camping out of doors. Use of boats at such camps is 50c per day. Thus it will be seen that the expense is considerable.

But with the little "housekeeping" camps and cottages, a party of four or five may live as cheaply as \$5. per week, each; with use of one boat, firewood, and ice included.

There is always some reduction made for the month of September; and as the law permits of fishing until well along into September, in many States, one may have as good a time then as earlier in the season. If one is to camp inland, "in the woods" so to speak, there is a decided advantage in waiting until September; for then the mosquitoes and black flies will be much less numerous.

A camp or cottage of this kind, large enough to accommodate four or five people, may be had for the month of September at from \$25 to \$30 per month. A larger camp will cost in the neighborhood of \$40 for the month.

In some of these, the bed-linen is furnished; but usually the campers must furnish their own bed-linen, table-linen, chamber and dish-towels, etc.

Some of the camps have but two large rooms; one above-stairs and one below. Usually there are sleeping accommodations for four or five persons; the beds are double; and are supplied with springs, mattresses, pillows, and blankets or comfortables. Curtains separate the beds, where more than one bed is in a room. The other

bedroom furnishings usually consist of commodes, toilet-sets, and a chair for each room.

Downstairs in the small camps, the space may be divided into two rooms, or, may be all in one large room. The furnishings usually consist of cook-stove, wet-sink, kitchen table and dish-closet, ice-box, dining table and chairs, living-room chairs and rockers, living-room table and lamp, livingroom stove or open fireplace, lamps and lantern, wash-tub, boiler, sad-irons, dishes, knives, forks, fuel, ice, and use of one boat.

Some of the cottages also have a cool cellar beneath them; with a dumb-waiter

up into kitchen.

For sanitary reasons the cottages are usually 5 or 6 rods from the source of the drinking-water supply; except in a few instances, in which the drinking water is brought into the cottage by piping.

A piazza affords a place for the hammock; which is so necessary a part of a vacation; but the hammock must be sup-

plied by the campers.

If a party of nurses takes such a camp, it is wise for them to plan the selection of supplies for cooking, the furnishings which they are to supply, and the housework carefully. A well-planned "system" will not only keep expenses within bounds, but simplifies the work very much.

Quite often common table-linen may be borrowed of one's family; also inexpensive silverware, if that is desired. Most nurses have plenty of bath and chamber towels, and probably wouldn't have to buy those

for camping.

It is so often a good plan for the cooking to be done by some one person in the party who has had experience in buying and cooking.

But each one should be willing to do her part of the general camp work; and when so divided, the work will not seem hard.

If none of the nurses are skilled with the oars, they will need to hire someone to row for them when they fish. Most row-boats accommodate but four people; so if a guide was hired, it would cost each nurse about \$1. But often some person (not a Registered Guide) may be hired for rowing, at much less than that.

The fish and game laws are strict in most States; and each nurse in the party should obtain a copy of the fish and game laws, and study them carefully before engaging in fishing or camping. A copy of these laws may be obtained from the Chair-

man of the Commissioners of Inland Fisheries & Game, of the State in which one proposes to fish or hunt.

If one wishes to fish or hunt, an outfit must be bought before going on the trip. For the appropriate outfit for different kinds of fishing and hunting, one must consult someone experienced in such matters, or get catalogues from some reliable sporting-goods companies, and select the outfit from those.

Among the large companies dealing in such complete outfits may be mentioned Abercrombie & Fitch Co., and Schoverling, Daly & Gales of New York; H. H. Michaelson, and David Abercrombie Co., of New York; New York Sporting Goods Company; Iver-Johnson Sporting-Goods Co., of Boston, and the T. B. Davis Arms Co., of Portland, Me.

There are almost numberless companies of this kind; but these few addresses occur

to me at this time.

For nurses who have a chance to sew for themselves, it is desirable that they make the garments for their outfit. A convenient clothing-outfit for camping in the woods or at the small inland lakes and ponds, is made up as follows: An outing-suit made of stout cotton goods as khaki, "Dux-Bak,' or "Kamp-It" cloth; a pair of leggings of heavy cotton material to match suit in color; 2 pairs of bloomers, made of cotton pongee, brown or tan gingham, or fine gray or tan linen or linene; a plain hat of linen, khaki, or duck; 2 colored cotton or silk handkerchiefs for the neck; a pair of high boots having thick soles, low heels, and laced. These are best of tan leather; and should be thick, for rough wear; plenty of stockings and underwear; a pair of old, loose corsets; bathgown and slippers; 2 nightrobes (preferably of outing-flannel, as nights near the water are often chilly); a dark-colored sweater; a common wool skirt and 2 or 3 washable shirt-waists to wear with it, about camp; 1 print or gingham wrapper or housedress; handkerchiefs; a good supply of complexion lotion for sunburn; a few simple remedies for headache, toothache, and for catharsis; some good mosquito and fly dope; a cake of foot-soap, and toilet soap; towels and bathcloths; a sewing-bag fitted with needles, pins, emery, tape-measure, thimble, thread and silk, an assortment of buttons, embroidery-frame and fancy-work; and any little extras desired, outside of the necessary fishing-tackle or hunting outfit.

Those who are interested in botany or mineralogy or photography, will find ample scope for these pastimes, on such a camping trip; and should bring necessary outfit with them.

A field glass is a source of pleasure, especially on long tramps over the surrounding country.

A few books and games will help to pass away the time on evenings or rainy days.

I would like to talk more at length of the joys of a vacation at camp in the woods; but will quote from Kipling,— "Do you know the blackened timber—do you know that racing stream

With the raw, right-angled log-jam at the end;

And the bar of sun-warmed shingle where a man may bask and dream

To the click of shod canoe-poles round the bend?

It is there that we are going with our rods and reels and traces,

To a silent, smoky Indian that we know— To a couch of new-pulled hemlock with the star-light in our faces,

For the Red Gods call us out and we must go."

THE IDLE THOUGHTS OF AN OPTIMIST.* By Henry Jones Mulford, M.D., Buffalo, N.Y.

I AM deeply honored at being permitted to address you. After your committee had waited upon me the other day I rushed out to tell the news to my wife, and I said to her: "What can I say to those girls? How can one man keep so many women quiet for a whole half hour?" "Oh," she replied, "tell them how to get married, and be happy!" Do you catch the subtle compliment in that remark? Tell them how to get married, and be happy! No one but a happy wife would have said that.

But, after all, there are various degrees of married happiness, the degree depending upon both parties to the contract. Here is a little poem which shows one side of the question. The title of the poem is—

Тне Есно.

(From Puck.)

I stood within a wooded glen
Before a mountain wall,
And, ringing to my ear again,
The echo mocked my call.
"O Spirit of the Glen!" I cried,
"Will all be bliss divine

When fast the nuptial knot is tied,
And Phyllis shall be mine?
Beneath the lamplight's rosy glow
At even shall I sit
And watch her fairy fingers sew,
Or mend, or hem, or knit?"
And Echo answered "Nit!"

*An address given before the Graduating Class at the Eric County Hospital Training School, February 20, 1914. "When to my cozy home I haste
For dinner or for tea,
What dainty dishes rare of taste
Will she prepare for me?
Of 'boarding out' I've had my fill,
My appetite's a-quiver.
O! say, what precious morsel will
Her skill to me deliver?"
And Echo answered "Liver!"

"In peaceful, placid streams of love

Will all our moments flow
As clear as Summer skies above,
Or Summer seas below?
Will both our natures sweetly chime?
Will all be perfect quite?
What will we do, O! Spirit? I'm
In love a neophyte."
And Echo answered "Fight!"

"And will I rule the roost?" said I,
"And always have my way?
And will my precious Phyllis try
To honor and obey?

Shall I be leader of the band?
Or, will my rule be wrecked?
I pray thee, tell me how I stand
To her in that respect!"
And Echo answered "Pecked!"

What a woeful picture of wedded bliss that is! I fear Echo is not an optimist! And now I'll tell you something about the other side; here are some stories about husbands, but, far be it from me to say that these stories are true!

Mr. and Mrs. Smith were discussing their neighbors.

"What a nice husband Mrs. Sherman

has," said Mrs. Smith. "He is so thoughtful and so tender, and they have been married over ten years."

"Humph!" grunted Mr. Smith. "Any man would be tender after being in hot water for ten years!"

Mrs. Murphy was getting the children's dinner one Saturday when a young man appeared at the door.

"I am collecting for the Drunkard's Home," he announced. "Can you give us something?"

Mrs. Murphy looked at him a moment, then replied:

"Come around to-night and I'll give yese Murphy."

The other day a clergyman was talking with one of his parishioners who was very much down in the mouth.

"You say you have nothing to be thankful for," the clergyman exclaimed, at last: "Why, man, look at your friend Hayes. He has just lost his wife, after a most trying siege of illness."

"Well," replied the man, "that doesn't do

me any good. I ain't Hayes."

I am glad to hear you laugh, but I am not telling these stories just to make you laugh. They point a moral. If you must follow my wife's advice, if you must get married, be sure that you marry a man. Do not marry a spineless individual, do not marry a drunkard, do not marry a brute. Now, I know what you are going to ask. "How are we to know how the men we choose are going to turn out?" What a question to put to a mere man! But, I can answer it! Some might tell you to use your instinct, but instinct, even a woman's instinct, is of doubtful utility, after all.

A boy said to his father: "Say, Dad, what is reason?" "Reason, my son, is that which enables a man to determine what is right." "And what is instinct?" the boy asked again. "Instinct? Why, instinct is that which tells a woman she is right, whether she is or not."

So, do not put too much trust in instinct. Instinct is only unconscious brain action and depends upon precious experience; it is not a supernatural attribute which has been given to us for our guidance. It is, merely, that the brain cells act before we are aware, but they cannot act if they have no knowledge of the matter before them. Now, a woman who is choosing a husband is doing something in which she, as a rule

has had no experience, and, having had no experience, her brain cells have nothing upon which to base a judgment. You will see, then, that instinct is blind, almost as blind as love itself. One who trusts to it will make as many mistakes as the one who trusts to Cupid. Choosing a husband is like choosing an egg: You do not know whether the egg is good or bad until you take it home and break the shell. In the same way one does not know what is in a husband until one takes him home and lives with him. breaks his shell, as it were. There is one very important point to be remembered in this connection; a husband is not always to blame for the way he turns out. You know, a man's companions help to develop him, and it may be, therefore, that the wife is to blame for the faults of the husband, sometimes. But, I said a while back that I could tell you how to choose the right man for a husband, and I will tell you now: Choose an optimist. Choose an optimist and you will be happy, for an optimist can do no wrong. But a word of caution before you marry. Remember, your marrying is going to spoil good nurses! We cannot spare our good nurses; we need them all. The doctors need them and the patients need them.

A friend of mine who recently returned from Europe met a lady friend upon the street.

"Why, how do you do, Miss Smythe?" he cried. "And how is your father? John wrote that he was ill."

"Poor father!" sighed the young lady; "we lost him?"

"Dear me! is that so?"

"Yes, the nurse married him!"

I overheard a bit of a conversation on the car one day last week. One man said to another: "Is Charlie out of danger yet?" "No," returned the other; "that pretty nurse is still with him."

There are dangers in all professions, but, in that of the nurse there seems to be more than in any other. There is the danger of mistakes in the sick room; there is the danger of taking the patient's disease; and there is, it appears, the danger of taking the patient himself!

Those of us who traverse the darker paths of this Earth have to carry a double burden: our own as well as that of the person whom we are serving. And often, this double burden seems almost more than we can bear.

We become weary, and then we become depressed. Bodily fatigue crowds upon our mental unrest and intensifies the latter; the brain participates in the fatigue of the body; body and mind react, the one against the other, and, soon, we are in almost as bad a condition as our patient. There are two remedies for this state of affairs. One is the time honored one of sleep, that blessed unconsciousness that brings rest after a day full spent.

"Whatever stinging brambles have beset The day's hot lane, to wound our weary feet,

Here, at Night's river, let our souls forget— The Bridge of Sleep is still, and dim, and sweet;

And, at its farther end, the clear-eyed Morn Waits, with her silver rod, to point the way

Where Hope's rose-hearted blossoms, newly horn.

Replace the withered flowers of to-day."
—(Harriet Whitney Symonds) Ainslie's.

But there is another remedy than this, another and a better remedy. Sleep gives rest, physical rest, but it does not annihilate the burdens of the mind. We sleep, but, when the new morn breaks, we arise and take up our burdens as before. The burdens are still there, and each day's recurrence but adds to their weight. The real way in which to remove such burdens is to become an optimist. An optimist has no burdens, no burdens of his own, and he gives no burdens to others. The optimist says to himself: "I will look up, and laugh, and love, and lift." You never heard anything more beautiful than that! "I will look up": my ideals shall be above me, and mine eyes shall seek them out; "and laugh": I shall go about my tasks with a smile, and my smile shall be for my enemies, if I have them, as well as for my friends; "and love": I shall love, and there shall be no room for hate; "and lift"; I shall lift mine enemies, those that hate me, and I shall lift my friends, those who are in trouble. look up, and laugh, and love, and lift!" What a text! Anyone living up to that text lives within sight of his God. He lives upon the heights, but, because he does he does not ignore his fellow beings below. No, he does not ignore them; he takes them with him.

But I see that you are becoming impatient. Just what is an optimist? you ask. You have been talking about this extraordi-

nary being for a long time, but you have not told us what sort of an animal he is. Well, there are many definitions of an optimist. The one most common is this: An optimist is one who sees always the bright side of things. Another one, but one for which I do not vouch, is: An optimist is a man who believes that every woman with golden hair is a natural blonde! But that is being gullible, is it not? Now, my own idea of an optimist is this: An optimist is one who always has a smile for himself.

That sounds a bit like selfishness, does it But it isn't selfishness; it is thousands of miles from that, thousands upon thousands of miles; it is eternally removed from selfishness, because it is everything that selfishness cannot be. The one who always has a smile for himself always have a smile for others; for he who can smile in the face of his own troubles surely can smile in the face of the trouble of another. easy enough to slap a friend upon the back and to cry, "Cheer up!" but, how difficult it is to cheer the labored heart when that heart is thine own! how difficult to check the tears in thine own eyes! But, if we can reassure others, why cannot we reassure ourselves? We can, if we be optimists. All that we need to do, after all, is to remember that behind every storm there is the calm; behind every shower the rainbow. All that we need is the vision of the optimist: the vision that sees. With that vision we can laugh as the storm rages about us; can smile as the rain beats against our faces; for then, our eyes can perceive the peace following in the wake of the one, and can catch the glint of the rainbow colors through the raindrops. The rainbow colors! Those colors everywhere manifest in Nature's dress! The fresh glad colors of the Springtime; the colors that blossom anew over the face of the earth every year. Springtime; named in Japan cherry blossom time!

"A yellow raft sails up the bluest stream,
And cherry blossoms cloud the shore with
pink.

The sky grows clearer with a curious gleam, And boys come playing to the river brink.

A grayish gull descends to preen and prink—

Far off a singing plowman drives his team—

A yellow raft sails up the bluest stream, And cherry blossoms cloud the shore with pink. Oh, to be there—far from this tangled scheme

Of strident days, and nights that flare and sink!

Let Beauty lift us with a colored dream; And, as we muse, too rapt and wise to think,

A yellow raft sails up the bluest stream, And cherry blossoms cloud the shore with pink.

-(Louis Untermeyer) Smart Set.

Spring in Japan! Spring everywhere! For everywhere are the same colors; the same colors only arranged in a little different fashion in the different regions, as the God of each locality may direct. may not be a yellow raft on the edge of which we may sit and dangle our bare feet in the bluest stream; but there will be the Spring flowers and there will be peace. But, alas! this may not last the whole year through. Spring flowers fade, and bluest streams freeze over! Now there is a region where the cherry blossoms bloom eternally, where it is always Spring; but that region is not a part of the material world. That region is the mind of the optimist. The optimist; he of the exalted vision!

What a gift such a vision is! what a gift! And to think that all of us may have that gift for the asking! It is a thought of mine that man was given two eyes because there are two sides to life, a good side and a bad side; and we need one eye to perceive the good, and one to perceive the bad. The optimist can perceive only the good, for he is blind in the one eye. Blind in one eye! you will exclaim; but how can we become optimists? We are not blind. No, you are not blind, not in that way, more's the pity; but you easily may become so. If you wish to practice optimistry, if I may be allowed to coin a word, all you have to do is to shut one eye, the bad one! And which is the bad one? Why the one on the right side; the good eye is the one on the left, on the heart side. Every optimist must have a heart behind his eye, a heart whose rhythm is the rhythm of joyousness, for, without such a heart, even an optimist will fail in his endeavor.

It would seem, at first glance, that the nurse is the last person in the world to become an optimist. She faces always sickness and trouble, and, facing them, she can see little beyond them. She carries that double burden of which we spoke a while ago. But, even under this handicap, the

nurse may, if she will, become an optimist. She needs but to close the one eye while with the other she searches out the smile within her own heart.

I want to reveal to you an idea that has been in my mind for some time. The idea is this: that social service might be associated with nursing. You know social service is a service through which we are supposed to help one another; a service from those who know to those who do not. It was designed, primarily, for the purpose of improving the condition of the poor, and to give an occupation to certain idle women. Under this impulse rich women may be induced to visit the poor under the idea that they are uplifting them; and they are, for the idea is a splendid one. But it is a mistake to think that the poor are the only ones in need of this service. Some of those same rich women are very much in need of it; in fact, there are times when we all need it, when we all need the help of our friends. Now, why isn't the nurse just the one for She goes everywhere, into this service? the homes of the rich, and into the homes of the poor. And she finds discord in all households; often a discord that seriously interferes with the recovery of her patient. The nurse, through her position, may observe, and, through her close intimacy with the household, may advise. Often the right third party may work wonders in such a household, but it *must* be the right party. Here is where an optimist would be in her element, for it is here that the way of the optimist is the best way. One must proceed gently, without the person most interested being aware of the process. One cannot do as the young matron did who was making her first social service call upon a poor The poor woman did not seem over pleased to see her, and this added to the embarrassment of the visitor. After a few moments of uneasy silence the visitor blurted out: "Does your husband get drunk?" The woman addressed frowned and retorted: "No, does yours?"

Now, that is not the way to make a beginning in this work. You do not start in by saying to your patient: "I know that your husband beats you. Can't I speak to him about it?" No, that is not the way. God forbid! You begin by saying—nothing! First of all you must win your patient's confidence, and, then, she speaks. Your smile, your happy heart and your gentle touch are the things that win: these things give the measure of your usefulness in this service.

Do not attempt it if you have not these attributes, for the absence of them will make of you only a blunderer.

Your smile, your happy heart, and your gentle touch! We have spoken of the smile, and of the happy heart, but the gentle touch; what of that? The gentle touch, your gentle touch; the touch of a woman's hand. Do you appreciate what that touch may mean? what that touch is? Why, it is a most wonderful thing! It is the greatest force in the world. There is nothing like it anywhere. It possesses the gentleness of the Summer breeze, and it possesses the rending force of dynamite; it brings forth and it destroys. The touch of a woman's hand; the touch that may make or mar a man!

Woman is the "amen" of creation—that is, the last word. You all understand this, for you all are women, and, being women, you understand about the last word. All husbands understand about it, too; but only

from hearsay. They never have been able to get within speaking distance of it themselves! But we allow woman many special privileges, knowing that whatever she does is for the best. Woman is the last of all created things, and, being the last, she is the best, following the rule of that ancient saying: "The last is best of all the game." And, so, being the best, we expect the best from her. I have told you quite a few things about the optimist; about his superb attributes, and all; and now I tell you that woman is everything that the optimist is. She is not yet quite aware of her own attributes, but she is beginning to understand. She is beginning to understand that she holds the whole world in the hollow of her hand; that the future of man is as she wills; that it is her touch that is to determine the welfare of the race. Ah, that touch! The touch of a woman's hand! The touch that can make or mar a man! No! not the touch that is to mar him: the touch that is to make

CORRESPONDENCE.

In communicating with THE GAZETTE always send your name and address. They will not be printed without your consent. We have but one place for anonymous communications, viz., the waste basket.

CHARITABLE HOSPITALS NOT LIABLE FOR NEGLIGENCE OF NURSES.

"Dear Doctor: Referring to this excerpt from Journal of A. M. A. published in your April issue, p. 188, I deny absolutely the accuracy of the statement so far as the law of New York State is concerned. I cannot go into the matter in detail, but would refer you to the case of Helen Ward versus St. Vincent's Hospital, New York, in which the plaintiff, a paying patient, eventually obtained a verdict for ten thousand dollars. The actual ground of action was for negligence of a nurse in permitting the plaintiff to be burned by a hot water bag or bottle while the latter was in the post-anesthetic condition of unconsciousness. The technical cause of action was for breach of contract. The case dragged on for years and was tried three times—the third trial was in May, 1900. The astute counsel employed by the hospital did their duty remarkably well, and used every known technical device to prevent Miss Ward from obtaining damages. They failed, as they deserved to do.

"Actions similar to Miss Ward's have in a few cases been successful in England. Some lawyers profess to believe that as "private" patients do not have a contract with the trustees of the hospital in which they may be receiving treatment,

no suit for damages can be sustained. 'Private' patients, these learned gentlemen contend, have a contract with their own physician or surgeon. This bizarre opinion is responsible for the rule at some hospitals that all 'hospital' patients must be anesthetized for surgical operations by a licensed physician, but that surgeons may employ any person they may choose to give anesthetics to 'private' patients. There is, however, no doubt that both in this State (N. Y.) and in England in some cases of negligence on the part of the trustees of a hospital a 'private' (paying) patient can successfully bring suit. A great deal must depend on the evidence, of course. For example, if the patient or the attending physician selects the 'private' nurse, the hospital is not liable for her negligence. A hospital is required to employ competent people, but what constitutes competence is obviously a question for a jury. If the patient or his physician requests the superintendent of a hospital to provide a registered nurse for a 'private' patient in a private room, and agrees to pay the usual price per week for the entire attention of that nurse, the probability is that in case of gross ignorance or neglect on the part of the nurse, an action for damages against the trustees of the hospital could be sustained. My recollection is that in Miss Ward's case the final decision was that as the plaintiff paid \$25.00 a week for a private room, St. Vincent's Hospital could not evade trial of the action on the ground that as a charitable institution it could not be sued either for breach of contract or for negligence."

LAWRENCE IRWELL.

425 Porter Avenue, Buffalo, N. Y.

Ouestions and Auswers.

The following answers are not "official." They are prepared for the editor.

VERMONT BOARD OF REGISTRATION OF NURSES.

MEDICAL NURSING & HYGIENE.

Examination At Montpelier, Vt., May 8th, 1913.

Answer ten questions. Number each question. Letter each subdivision. Do not write the questions.

- 1. State (a) the cause, (b) the symptoms of bed sores. (c) How prevented? (d) Give treatment in full.
- (a) Bruising, pressure, moisture, uncleanliness and an uneven bed. (b) Redness and other signs of inflammation followed by blistering or abrasion which develops into a shallow ulcer. (c) Prevent pressure on bony prominences by changing patient's position often as necessary, or when this is impossible, by protecting tender spots by ring cushions, pads, pillows or dry dressings so arranged as to support the body comfortably without pressure on susceptible areas. Keep skin strictly clean by daily bathing with soap and water followed by rinsing and thorough drying. An alcohol rub and application of powder should be given often enough to keep the skin dry and healthy—every hour if neces-The bed should be kept clean, free from wrinkles, bread crumbs or other sources of irritation. (d) Remove pressure, cleanse wound with antiseptic wash, powder liberally and protect with soft gauze compresses; change dressings as they become moist. Some surgeons prefer a dressing of zinc ointment retained firmly by adhesive. If sloughing is inevitable it must be favored by poulticing and the resulting deep ulcer must be treated in such a way as to favor free discharge and healing from the bottom; the details of this procedure are left to the attending physician.
- 2. What is (a) the normal temperature of the body in health? (b) What are the limits of temperature in health? (c) Where may temperature be taken? (d) How does it differ in these locations?
- Ans. (a) 98.6 degrees Fahr. (b) 97.2 degrees to 99.5 degrees. (c) In mouth, axilla, rectum or vagina, groin. (d) Temperature of axilla and groin is usually about ½ degree lower than that of mouth; rectum and vagina about ½ degree higher than mouth.

3. Name the sequelae and complications of scarlet fever.

Ans. Sequelae: enlarged tonsils, deafness, mastoiditis, endocarditis, chorea, nephritis. Complications: sore throat, otitis media, rheumatism, synovitis, nephritis, myocarditis, bronchitis, pneumonia, delirium, meningitis.

4. How do typhoid bacilli enter the system? (a) By what mediums are they conveyed? (b) What precautions must a nurse adopt to protect herself and others in nurs-

ing typhoid?

Ans. Through the mouth. (a) Drinking water and water used for washing food and utensils, milk and other dairy products, ice, oysters, and any medium whatsoever that has been contaminated by a "typhoid carrier." (b) Disinfect all excreta from the patient, and all dishes and utensils used in care of patient, and all bedding, clothing, etc., coming from the sick room. Destroy all remnants of food and medicines as soon as removed from sick room. Observe strict cleanliness in all her work and wash her hands most carefully before passing from the sick room to any other occupation.

5. Give some of the "danger signals" in pneumonia crisis. (a) What treatment

should be given at the time?

Ans. Rapid fall of temperature considerably below normal, great prostration, nose-bleed or other hemorrhages, edema, or other signs of weakening heart. (a) Heat externally, normal saline by hypodermoclysis or rectum, various heart stimulants or other restoratives as prescribed by the doctor.

6. Define (a) communicable (b) contagious (c) infectious disease. Give ex-

ample of each.

Ans. (a) Capable of being imparted, as measles. (b) Communicable by direct or indirect contact, as gonorrhea. (c) Communicated by implantation of morbid agent from without, as typhoid fever.

7. Under what conditions are nutritive enemas ordered? (a) How are they given? (b) How often? (c) Give a formula for

same.

Ans. When patient is unable to swallow. when gastric digestion is impaired, in operative cases where the upper part of digestive tract is temporarily out of use. (a) Give cleansing enema of salt solution if possible an hour before the nutrient enema. Patient lies in Sims position, hips elevated. A rectal tube with large glass funnel attached is lubricated and passed ten or twelve inches into the bowel. The nutrient fluid at temperature of about 95 degrees Fahr, is poured into funnel and allowed to enter rectum slowly. Patient must lie quiet for a half hour to prevent expulsion of (b) Every three to six hours, acfluid. cording to the amount given at one time, which may be from two to six ounces for (c) One raw egg and three an adult. ounces peptonized milk.

8. Give nursing treatment in detail for

sudden collapse of patient.

Ans. Elevate foot of bed, keep warm by application of external heat to extremities, maintain circulation by friction of extremities under cover, give an abundance of fresh air or oxygen, give hot normal salt solution under skin, into the rectum or a vein. Stimulants may be given by mouth, rectum or subcutaneously. Electricity, a hot mustard foot-bath or mustard plaster over the heart may be used for stimulation.

9. Describe appearance of blood in hemorrhage from lungs. (a) Define nurse's

duties in such an emergency.

Ans. Bright red, frothy and alkaline.
(a) Keep patient very quiet in bed with shoulders elevated. Keep room cool and admit plenty of fresh air. Give ice to suck. Apply ice bag over chest if it relieves bleeding. Give no stimulants. Morphin is useful to quiet cough and allay excitement.

10. Give all the essentials of an ideal or

hygienic sickroom.

Ans. To be well ventilated, well lighted by the sun, to have sufficient heat easily regulated, to be screened from flies and other insects, to be finished and furnished in simple and restful colors without extra furniture, ornaments or draperies, to be free from dust, to be free from noise inside and outside, to be clean.

11. What are the duties of a nurse when

caring for a case of tuberculosis?

Ans. Sputum must be collected in covered receptacles or moist rags and burned before it can dry. Hands and face should be washed frequently, especially before eatting or touching food. A cloth should be held before the mouth when patient coughs. Patient should not share his bed or bedroom with anyone else. All laundry from patient's body or room should be soaked in antiseptic solution as soon as removed, unless it is placed directly in a boiler. In cleaning the room some dustless method must be used. Room must be liberally supplied with fresh air and sunshine. Patient should be out of doors day and night if Nurse should see that patient possible. keeps clean, is well fed, warm enough, and that he rests when he is not in condition for exercise, according to the directions of the physician. Special care, suited to the case, is directed by the physician. The nurse must use every precaution to avoid infecting herself and others with whom she associates. She should wash her hands after caring for the patient and especially before her meals. She should never eat in the sick room. She should have a daily outing in the open air and should not wear the outer clothing that she has worn in the sick room.

12. What is (a) empyema? (b) Of what disease is it a sequel? (c) Give treat-

ment.

Ans. (a) Pus in the chest cavity. (b) Pleurisy. (c) Surgery.

13. How can you determine if the air

of a sickroom is fresh?

Ans. Breathe the outside air long enough to get accustomed to it. Then breathe the air of the sick room; if it has any perceptible odor it is not fresh. The proportion of carbon di-oxide may be ascertained by shaking a measured quantity of lime water with a measured quantity of the air of the room. This test requires special practice and is ordinarily too fussy for the nurse to apply.

MATERIA MEDICA AND URINALYSIS.

Examination At Montpelier, Vt., May 8th, 1913.

1. What are the names of weights used in the apothecaries table?

Ans. Grain, scruple, dram, Troy ounce, pound.

2. Define (a) expectorant. (b) Digestant. (c) Rubefacient. (d) Diuretic. (e) emetic. (f) Cathartic.

Ans. (a) A remedy that aids expector-

- ation. (b) One that aids digestion. (c) One that reddens the skin. (d) One that stimulates the flow of urine. (e) One that causes vomiting. (f) One that causes evacuation of the bowels.
- 3. Give dose of Croton oil. (a) How best administered?

Ans. One drop. (a) Placed on the tongue with 5 drops of sweet oil.

4. Give (a) ordinary name of oleum tiglii. (b) Oleum Terebinthinae. (c) Oleum Ricini.

Ans. (a) Croton oil. (b) Turpentine.

(c) Castor oil.

5. If Nitroglycerine gr. 1/200 hypodermically was ordered and you only had tablets gr. 1/100, how would you proceed?

Ans. Measure twice the quantity of water required for the desired dose and in it dissolve the tablet; administer one-half of the solution.

6. Name two emetics easily procured in any household.

Ans. Warm water, mustard.

7. What is indicated by the order, "Give Hydrargyri chlor, mite grs. ii t. i. d."? (a) What should be avoided in diet after?

Ans. Give two grains of calomel three

times a day. (a) Acids.

soning by carbolic acid?

8. What precautions should be taken in administering iron preparations? (a) Name some of the iron preparations used as medicine.

Ans. Avoid staining the teeth; give well diluted, through a tube. (a) Blaud's pill. Basham's mixture, reduced iron, tincture ferri chloridi.

9. Give usual hypodermic dose of strychnia. (a) Name two alkaloids of opium in common use and hypodermic dose of each.

Ans. One-thirtieth of a grain. (a) Morphin Sulfate, grains 1/2; codeine, grains 1/2.

10. How would you treat a case of poi-

Ans. Wash out stomach with 25 per cent. alcohol and water. Apply dry heat to body. Give hypo of strychnin. If more stimulation is needed give adrenalin, 1/1000, intramuscularly followed with hypo of atropin. Give hypo of camphor in oil, repeated until effective. Give no oils by mouth, keep patient as quiet as possible, let him drink freely of milk, albumin water and starch water.

11. Give test for (a) acid; (b) alkaline urine. (c) Give a test for albumen in urine.

Ans. (a) Turns blue litmus paper to red. (b) Turns red litmus paper to blue. (c) Nitric acid, C. P., is "overlaid" with a small quantity of urine by pouring urine gently into an inclined test tube containing a few c. c. of the acid. If albumin is present it forms a white layer or "ring" at the line of contact of the two fluids.

12. What is spec. grav. of normal urine?(a) Give amount secreted in twenty-four

hours.

Ans. From 1,010 to 1,030; usually about 1,020. (a) About 50 ounces, or 1,500 c. c. VERMONT.

STATE BOARD EXAMINATION, Montpelier,

May, 1913.

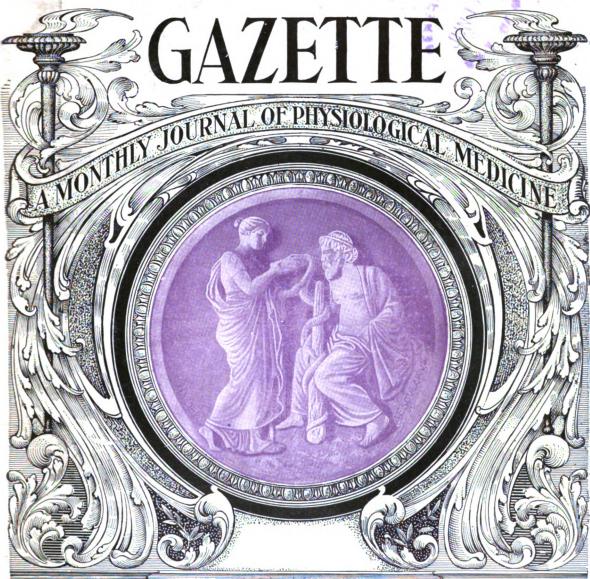
Obstetrics. (1) What do you understand by the term pregnancy? (2) What are the physical signs? (3) Define the following: (a) abortion, (b) premature labor, (c) extra-uterine pregnancy, (d) placenta previa. (4) (a) How many stages of labor? (b) Describe each. (5) How would you prepare a bed for labor in a private house? (6) What care would you give the breasts before and after delivery? (7) (a) What is the lochia? (b) What are the signs of hemorrhage? (8) What are the symptoms of eclampsia? (9) (a) What care should you give the eyes of the new born? (b)The mouth? (10) If alone, what would you do for secondary hemorrhage from the cord? (11) (a) What is the best food for babies? (b) Give temperature of water for first bath? (12) What is the danger of using a glass catheter during labor?

Surgical Nursing and Bacteriology. Define strabismus, myopia, hypermetropia and ophthalmia neonatorum. (2) What is the safest method of removing a foreign body from the ear? (3) Define fracture, ecchymosis, gangrene, abscess. (4) Define antiseptics, germicides, deodorants. Name one of each with indications for its use. (5) Classify bacteria according to shape. What conditions are necessary to their growth? (6) Define spore, parasite, saprophyte. Name two spore bearing bacteria. (7) Describe in detail the various steps in catheterizing a female patient. (8) Name and describe uses of five positions of patient for operation or treatment. (9) What is cystitis? (10) What becomes of a silk ligature left buried in the tissues? Define hemorrhage, shock, coma, asphyxia, (12) Name four purposes for syncope. which enemata are administered.

Have your answers to these questions ready for comparison with the answers to be given in a later number of the GAZETTE.

THE

DIETETICANDHYGIENIC



PUBLICATION OFFICES

87 Nassau St.

New York

\$1.00 Per Annum. 15c. Per Copy.

Entered as Second-Class Matter at the New York Post Office.

Digitized by Google

The best antiseptic for purposes of personal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teeth.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY LOCUST AND TWENTY-FIRST STREETS :: ST. LOUIS. MO.

VACINAL ANTISEPSIS IS COMPLETELY SECURED THROUGH THE EMPLOYMENT OF

(FORMERLY KNOWN AS CHINOSOL COMP. VAGINAL SUPPORTORIES)

These suppositories are indicated in cervicitis, leucorrhea, specific and nonspecific vulvo-vaginitis and in all cases where complete vaginal antisepsis is desired.

NON TOXIC, NON IRRITATING, NO DAMAGE TO MEMBRANES.
YET A MORE POWERFUL ANTISEPTIC THAN BICHLORIDE

Chinosol—Tablets and Powder Full Literature on Request

CHINOSOL Co.

PARMELE PHARMACAL C SELLING AGT. 54 SOUTH ST., N. Y.

Digitized by Google

THE

DIETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A.M., M.D.

Vol. XXX.

JUNE, 1914

No. VI

EDITORIALS.

HOT WEATHER HYGIENE.

PERHAPS the most vital of all summertime subjects is milk; and a most authoritative article on this subject by Dr. Popper is contained in this number of The GAZETTE. Impurity of milk is one of the greatest factors in the large infant mortality. Breast fed infants almost never suffer summer complaints and dysenteries; these diseases come largely from cow's milk, either impure or improperly prepared and this mortality can be largely avoided—is indeed summer after summer being progressively diminished. A mother said to a great physician that it had pleased Providence to take her baby from her; he rejoined that it was most unfair to blame that death upon Providence; Providence had really nothing at all to do with the matter. It was bad milk killed that mother's baby; and the death could have been prevented by the exercise of cleanliness and common sense. So municipal authorities, aided most nobly by unofficial philanthropy, have been accomplishing vast improvement in our milk supplies. Pasteurization, the process which Mr. Straus has fought so hard through years to get established, is now likely to become the process universally required for rendering milk a safe fluid. Large dairy concerns now serve their milk pasteurized, or pasteurization can be done in the home by means of the Straus Home Pasteurizer. This consists essentially of three parts: a can, a rack to hold the bottles of milk and a top for the can. The bottles are filled to the neck, the patent corks are snapped on

and then the bottles are placed in the rack. The rack is then so placed in the can as to be supported by three projections on the inside of the can. Boiling water is then poured into the can until it reaches a certain mark just below the bottoms of the bottles. The covers are then placed on the can and the bottles are left in this position for five minutes to heat them through. When five minutes have passed, the cover is taken off, the rack is given a half turn so that it is no longer supported by the projections on the insides of the can, and it sinks slowly to the bottom of the can. The cover is then replaced. It is advisable to perform this operation as rapidly as pos-The whole is then allowed to stand for twenty-five minutes, when the cover is removed, the rack lifted out, the hot water partially emptied, and cold water poured into the can in its place. When the bottles are cool enough so that they will not be cracked by contact with ice, ice is added to chill them as thoroughly and quickly as possible. Pasteurization is thus accomplished with a degree of exactness almost unbelievable unless one has seen the experiment with the thermometer. For the first five minutes that the bottles rest in the water the milk reaches a temperature of 157 F. it then remains at exactly this temperature without variation of more than two degrees for the remaining twenty minutes that the bottles are in the hot water. The cost of this contrivance is nominal, about a dollar and fifty

DIET AND DRINKING.

COMMON sense as to eating oozes out of a good many people along with their perspiration in hot weather. One must take nourishment in the summer though not so heartily as in the cold months. And some of the things eaten in winter must be eschewed (no pun intended) during the dog days—the Bingo frankfurter, for example. The food must be of the kind it takes least energy to digest. Energy makes heat, in the body as elsewhere. And eat lightly; no gourmandizing; hunger can always be satisfied if necessary by a glass of cool milk with bread or crackers between meals. Don't nibble; and keep away from the sundae emporium. Never eat when tired or hot; dine if possible in the evening when work is over and when there is comparative coolness. Here are some blood refrigerating fruits: fresh juicy grapes, oranges, lemons and limes in lemonade, cantaloupe, watermelons, (but not in excess, lest there be those meloncolic days of the poet) rhubarb, peaches, cherries, berries, apples, pineapples, pears; be most careful of unripe or overripe fruit. And there are leafy or fibrous vegetables that tend to the same thing;

tomatoes, celery, spinach, asparagus, lettuce, beets, onions, (besides, in onion there is strength); all green salads also—endive, chicory romaine, watercress, tomato, let-tuce, vegetable. The right summer foods are: thin soups or better, cold bouillon; fresh fish or fowl; roasted or broiled beef, mutton or lamb in moderation (once a day suffices for hot weather); eggs soft boiled, scrambled, or lightly fried (but none of your fried both sides, coated with a layer of fat impenetrable by the gastric juice, near-leather article); simple desserts of gelatine, custard, ices and ice cream. Cut out entirely or go very slow on thick soups, canned meats, spices and condiments, nuts, beans, oils, cheese, bananas, dates, preserves; hot drinks, ice cream sodas and alcoholics do not quench thirst. water freely at meals; copiously between meals. Chocolates and sweets had best be avoided. If the object of a young man's adoration is strong for candies let him explain to her that candies are mostly carbon, the same as coal; and how blighted his existence would be should she be utterly consumed by that kind of fuel being ingested.

SUMMER SNEEZES.

We have colds all the year round—winter colds, the "cub gedle Sprig" kind, summer colds and hay fever. The temperature of the air has very little to do with catching cold except as it lowers the bodily resistance. And extreme heat can do that as well as cold can. In the summer the change may be great within a few hours; it has been ninety in the morning and near freezing toward evening. The predisposed condition of the body plus germs are what result in colds. At sea or by the seashore one seldom catches cold. Arctic explorers never catch cold while they are at or near the Poles; but they are as likely as anybody to do so when they return to civilization, where the germs are. The cold air treatment is the ideal one for consumptives, who get well more surely in the winter than in the summer time. The common cold is usually an infection—that is, the germs from a sneezing, spitting, coughing victim are distributed through the air, or by the dust laden breezes; and pre-

disposed (run down) people breathe them in and then "catch cold." mer colds are the meanest of all because they make you and everyone else so uncomfortable, and are so hard to get rid of. People are sympathetic when you have a winter cold; in summer they are resentful because you are making what seems to be an unreasonable nuisance of yourself. You begin with sneezing; your nose is stopped up and you speak thick; headache, chill and fever follow; then pains in the back, heaviness in the bones, and that tired feeling-all of which, being interpreted, means that the germs are having a hot old time throughout your internal relations. If you feel this way make an anchorite of yourself until your snuffles are over. Why? Good old Ben Franklin could have told you why a century and a half ago; he sensed that people caught colds from one another—that germs play their parts in most colds, although he could not see the germs under the microscope as we do to-day.

HOT SPELLS.

DURING and after a hot spell the press relates how many people have succumbed; but it does not tell of the much higher mortality indirectly attributable to this dreadful temperature—the deaths from "heart failure," kidney and liver disease, dysentery and so forth, which would otherwise surely not have occurred. In one respect the high temperature in our latitudes affects us more disastrously than it does people in the torrid zone, because they are occasional, whilst the tropical temperature is equably high. Those living within the

tropics expect heat, and prepare themselves accordingly; we on the other hand adjust ourselves to what the geographers with somewhat grim humor term our "temperate zone," when the morning after an almost frigid day we are all of a sudden caught in a descent of humid heat that would make the visitor from India among us "sigh for Calcutta." An English diplomat stationed at Washington once found a June temperature that very nearly "did for him" and wrote home that "one quart of the American summer climate would thaw out all Europe."

HEAT EXHAUSTION AND SUN-STROKE.

HERE are two entirely different ways in which the body succumbs to overpowering heat. And the distinction is important because the treatment differs most radically. The patient with heat exhaustion is prostrated, his skin is cool or cold and clammy; his muscles are relaxed; his pulse small and frequent; his temperature below the normal. Wherefore he must be stimulated, with aromatic spirits of ammonia, till the doctor comes; a warm bath and hot water bottles to his feet—but no ice. Sunstroke (heat stroke or thermic fever) comes about generally through severe exertion whilst exposed directly to the sun or to high temperatures, as with tennis players or firemen. Alcoholics are very prone. In severe cases the victim falls unconscious and may die at once or after a few hours of coma and snor-Or he may speak of ing respiration. colored or indistinct vision; sudden arrest of perspiration and headache; then he will all of a sudden become dizzy, nauseated, vomiting, unconscious, with face flushed, skin dry and hot, pupils perhaps dilated, muscular spasm or convulsions, temperature perhaps as high as the clinical thermometer will indicate, a quick and bounding pulse, and Put such a breathing deep and labored. patient in as cool a place as possible, till the doctor comes, sponge and sprinkle him with ice water or rub him with ice. People who have had strokes must take no chances, especially cutting out alcohol.

CLOTHING.

VISITORS from the East and from south of the Tropic of Cancer tell us that we do not wear rational clothing during the heated term. Americans in Manila will dress in cool clothing and be comfortable; whilst at home they gasp, perspire and disintegrate, both physically and as to temper, in clothing that has no relation whatever to the thermometer. Why do we not naturally go over to tropic garb whilst our weather is tropical; why not, like the revered Mark

Twain, go about in white samite, though we may none of us ever hope to appear as "mystic and wonderful" as he was. One potent reason for this latter unwisdom is of course our slavery to custom. Another is that just intimated: should we to-day don linen and duck we would like as not to-morrow need an overcoat, and need it badly. In every heated term we are expecting that tomorrow, or very likely the next day, but very positively the day after that, we shall

have it quite cool again. Thus like our climate and our politics, our notions about hot weather dress are a good deal mixed. Nevertheless we have of recent years made marked advances in common sense summer dressing. Only the colored clergyman wears a high hat and a frock coat on a hot day these times. The shirt waists of the women seem always cool, as certainly their wearers are comely in them. Nobody objects to them on the score of propriety, as

why should any one, but for men to go about without coats is decried as highly improper; yet why there should be any objection to a man trimly shirted and his trousers well belted. Even an ornery looking citizen might hope to appear handsome that way. And why should men go hatted either. Away with hats in the summer time except in the intense sunshine; if this becomes the custom a whole lot of baldness is likely to go the same way.

HOW TO TAKE A VACATION.

People should take their vacations according to their temperaments. A business man whose mind and body are naturally active, to whom excitement has been meat and drink, will get harm rather than benefit from "resting for a change," doing absolutely nothing but eating, sleeping, and twiddling his thumbs for hours together on a hotel porch. Innocuous desuetude will not, cannot recreate him; for the activities over which he has become wearied other and diverse-though not strenuous onesmust be substituted. Golf, rowing, walking, motoring, sailing (with the tonics and the Broadway bracers all cut out) will rejuvenate such an one. Another mistake, and a graver one, is to expect a party past middle life, whose habits throughout many years have been sedentary, to go in for violent exercise; such a course has been known to prove fatal, or at least to hasten a fatal issue. Give that kind of a man a grassy bank by a pretty stream, a pole and reel in his hand, or an interesting book to raise his eyes from now and then. Anyway, all exercises must be carefully graded. man who has never before played golf must not try for eighteen holes the first day; a few holes must suffice in the beginning, with resting between drives. On a walking trip no more than five miles the first day; ten the next; at the end of the week any old mountain or a jaunt from sunrise to twilight will be safe. And in exercising the body the mind should also be refreshed and cleared of its cobwebs. In considering the effect of exercise on the nervous system we find that different occupations make a call on the energy of different areas in the brain; so we must try to rest the areas used in the daily routine, and to bring into function different areas.

VACCINATION AGAINST TYPHOID FEVER.

The use of a typhoid vaccine will prevent this disease. In war typhoid fever has ever been far deadlier than the enemies' weapons; but the vaccinating of soldiers against it has rendered them almost entirely immune. German and English military camps have become practically free of typhoid fever; and this is becoming so in ours, now that vaccination is compulsory among regular American troops. This fever is contracted only through whatever is taken—food and drink—into our mouths. It is mostly a water borne infection, and next

in frequency milk borne. When the antityphoid inoculations are made in the afternoon all untoward sensations are likely to have disappeared by the following noon; successive inoculations are made a week apart. Especially should they be submitted to by travelling business men, who may in the most insidious ways contract typhoid. Here is peculiarly a disease of youth and early manhood and womanhood. It would be well for those young men and women who go to college and boarding school to submit to this preventive measure before leaving home. Tourists and vacationists

should be vaccinated against typhoid. They may not only themselves get typhoid; but they may also become "typhoid carriers," introducing the germ into communities hitherto exempt. Indeed, there are carriers and distributers of the germ who have not

themselves suffered the disease of which it is the essential and specific cause. It is considered that the protection is effective for two years and that the one inoculation may indeed afford complete immunity for many years, if not for life.

THE TYPHOID FLY.

We have typhoid fever with us more or less all the year around; but the greatest mortality is in the Fall; hence doctors speak of it as the autumnal disease. It was formerly thought that city people going for their holiday contracted typhoid from the wells and from the impure milk they got in country boarding houses. Unquestionably the old oaken bucket, the babbling brook and the rustic dairy have oftentimes been to blame; and vigilance concerning them should be abated not one jot. But we have been learning a great deal about flies; and have become convinced that many an urbanite has contracted his typhoid before ever he went into the country; as also many a tourist and motorist who has perhaps unjustly blamed the country hotel. Count back two months from the Fall rise in the typhoid death rate and you will begin with flytime-when this insect flourishes most luxuriantly. Your fly is the most congenial mixer in the cosmos; in this respect there never was a congressman that could come anywhere near him. It's all one to the fly: he visits indiscriminately the manure heap (95 per cent. of him are born there), the privy, the spittoon, the dead quadruped in the public thoroughfare, the chamber of a typhoid patient; and in

such way is likely to get thoroughly saturated with typhoid germs; then he alights on unprotected vegetables, meats and fruits; and so goes through your unscreened windows and kitchen doors to your sugar bowl, your milk pitcher and your baby's nipple. Now, the incubation period (when one has contracted typhoid and doesn't realize he has the disease) is about a fortnight. This period is likely to tally with that of the greatest fly prevalence. Typhoid fever, from beginning to end lasts about two months: two weeks incubation; four weeks of about as miserable sickness as there is; and two weeks more (longer indeed, if there is a relapse) before we can say convalescence is really on. And then September or October is reached. The lesson here is obvious: there is little use in swatting the fly-starve him; separate him absolutely from his provender, if you want to make this filthy creature extinct. How is this to be done? That is a story all by itself; and it would tell also of other diseases disseminated by fliestuberculosis, the summer complaints of infants (which make the dreadful mortality among them), scarlet fever, diphtheria, granular lids, cerebro-spinal meningitis, leprosy, plague, carbuncle, lockjaw, smallpox, rabies and so forth.

MOSQUITO EXTERMINATION.

Many a community has failed in its efforts for mosquito extermination and has given up in disgust—with rage toward those false medical teachers; the reason for this has almost invariably been that somewhere some breeding place has been ignored as too trifling for consideration. A single negligent householder has thus frustrated the zeal of a whole neighborhood. All breeding places within the radius of a mile if possible, must be drained or filled in with earth or oiled. The only means whereby mos-

quitoes can be permanently vanquished is the destruction of their breeding places, which may be anywhere that water can accumulate and stand for ten days or more. Only in stagnant water is there breeding. It is excellent to drain marshes, pools, springs, ponds, fountains and wet places in lawns and gardens; but extermination will not be thorough and effective unless one realizes that no body of water, not even a teaspoonful, can be too small for a mosquito nursery, expecially if grass and algæ abound in and about it. Myriads may breed in water puddles by the roadside; in little used watering troughs; chicken pans; poultry yards; water cups standing on the frames of grindstones; water accumulations in garden furroughs or in fields; moist, mossy and especially clayey soils; any tree notch hollow or pocket; footprints of animals in marshy lands or along the road; irrigation ditches and excavations; drains and gutters choked with grass or weeds; defective roof and lane gutters; old boats along water front; hollow in rocks; beds of old canals; wherever there is green scum; the backwaters of even rapid streams; pools by the sides of open streams; earthenware vessels; water barrels and tubs; cesspools or disused wells; beer or soda water bottles, broken or otherwise; the water tank of an acetylene gas machine; fragments of broken glass put on the tops of walls to keep cats and small boys off the premises; water pitchers in unused guest-rooms; vases in which water has not frequently been changed; discarded tin cans in back yards; the old oaken bucket; fire buckets; refuse thrown on the dump heap; in water under old stones or in moist collections of decayed leaves; sewer catch basins; mud pools in vacant lots; shallow ponds with dirty edges. A large brood may be hatched in a puddle that may evaporate within a fortnight. Or eggs or wrigglers may lie dormant in moist earth, to develop into mosquitohood when a shower renews the water; this fact may in a measure account for the sudden appearance of swarms of mosquitoes after a heavy and

prolonged rainfall. Depressions that hold water temporarily may go unnoticed in the surrounding high grass. A single female may of a night deposit several hundred eggs, massed and floating raft-like, in a tiny rain-water puddle. The little rain-water pools on the rocks by the seashore must not be forgotten.

Drinking places for chickens should be emptied daily, old unused wells should be filled in; cesspools should be dosed at least weekly with kerosene. Fountains should be kept pure-watered. It would be well to introduce gold fish, minnows, sticklebacks, sunfish, "millions" or other fish to which wrigglers are delicious tidbits. Water barrels and roof tanks must be screened. There are metal, knapsack-like sprinklers from which oil can be projected many yards; this is carried on the back. Or an ordinary garden sprinkling pot may be used.

Since mosquitoes breed only in standing water; to eliminate them requires simply to find and to drain or spray with oil all the possible mosquito haunts. The best kind of oil is crude petroleum or the common fuel oil; or Phinotas oil (which may be had in the drug store) can be used. One ounce of kerosene will cover 15 square feet of water surface, and will remain effective ten days. The wind may blow this oil aside; but it will generally seek its level again when the wind changes. And though eggs may have been deposited in the meantime the return of the oil will kill the new In thoroughness lies the whole larvæ. secret to success.

OTHER INSECT GERM SPONGES.

AND while attending to the fly's and the mosquito's business settle that of other insect carriers. Look out for the common stable fly which conveys to little children the germ of infantile paralysis. Then there is the insect with the imperial name of pediculus capitis vel vestimentorum, in plain English the louse, which has been known to convey to human hosts the germ of typhoid and of relapsing fever. And that polecat among insects, the bedbug, which has done the same for smallpox, relapsing fever and typhoid fever, and no doubt also

other diseases. And the flea, a carrier of the germs of typhus fever, typhoid, consumption, leprosy and plague. The roach, too, has performed the kindly office of intermediary. You can get rid of pretty much all these pests by cultivating in the home centipedes and like creatures which kill and eat them. But if you prefer to do something radical write to the Bureau of Entomology, in the Department of Agriculture, Washington, D. C., and you will get practical, succinct and altogether adequate directions how to act.

ORIGINAL ARTICLES.

SOME SURGICAL ASPECTS OF INDIGESTION AND DYSPEPSIA.*

BY PARKER SYMS, M. D., F. A. C. S.

To have an intelligent idea of this subject it is necessary to form in our minds some conception of what we understand to be normal digestion.

By normal digestion we mean the result of those processes whereby food is taken into the body, and is so changed that the elements essential for nourishment and regeneration of tissues are prepared by chemical and mechanical agents for absorption and assimilation. If this be perfectly accomplished, it means that the important elements are separated from the unimportant, those that are needed being taken into the system and those that are not useful or essential being discarded. The organs which perform digestion may be said to constitute a very complete mechanicochemical laboratory in which the good is changed physically and chemically. These organs are very complex and the process itself is one made up of many elements. The mind and the imagination play an important role, for the process of digestion begins before food is actually taken into the body; the thought of food, the sight of food, the smell of food, act as normal and potent stimuli to set in motion the train of functions which are about to be called upon. So that when food has been placed in the mouth the important glands and organs not only of that region but of the stomach and small intestines have been more than warned and prepared;—they have actually been set in motion. The saying that the sight of food or the thought of food makes the mouth water is not a figure of speech,-it is a fact. In the mouth begins the actual function of preparing the food for digestion; by the teeth it is ground into a pulplike mass; by the salivary gland it is moistened and mascerated and by the mucous

*One of the series of lectures delivered under the Auspices of the Social Service Department of the Lebanon Hospital, in the Bronx Borough, New York City. 1918-4.

glands it is rendered pultaceous and viscid, so as to be more or less held together in masses suitable for swallowing. comes the process of swallowing. This is accomplished by a rhythmical motion of the muscles of the œsophagus or gullet. These muscles act in concert and in unison in such a way as to grasp the food and force it gently but surely into the stomach. Having reached the stomach, the food is further moistened and softened by certain juices of that organ; and other juices of the stomach exert a direct and definite chemical action on certain elements of food whereby they are made ready for the next step in the process.

While the food is in the stomach it is subjected to constant agitation being actively stirred and mixed with the physiological elements which have been added to it, namely the saliva, and the various forms of gastric juice, and is subjected to the chemical action of the elements of these juices, such as ptyalin-pepsin, hydro chloric acid, etc. Having been thoroughly mixed and stirred in the stomach and brought sufficiently in contact with the juices with which it is mixed, the food now reaches the lower end of the stomach, the pylorus, and by proper rhythmic motion of the muscles of that portion of the stomach masses of food are passed from the stomach into the duodenum—the highest portion of the small intestine. Within the duodenum the food comes in contact with another set of juices, each one of which is essential to digestion. By a common duct or canal there is poured into the duodenum the bile from the liver and the pancreatic juice from the pancreas. And there are numerous glands within the structure of the small intestine itself which contribute their chemical agents.

Digestion is not completed within the stomach as was at one time thought. Digestion is a progressive process; it is begun



within the mouth, it is continued within the stomach, and it is continued and completed within the small intestine. Absorption, or the taking up into the system, of digested food, takes place almost entirely within the lower end of the small intestine and within the upper portion of the large intestine. The stomach is not an organ of absorption. Within the large intestine the final separation of the good from the bad, the useful from the useless, has taken place, and nothing remains but that which is to be discarded.

Even from this brief and incomplete description of digestion, one may readily see that it is a very complex process, and that it depends for its proper performance upon the concerted action of a large number and of a great variety of healthy organs. It depends upon nerve impulses, upon muscular action, and chemical reaction, each one in its proper place, each one in its proper time, and each one in its proper relation to each other. In other words, digestion cannot be complete and satisfactory if there is any break in the chain. It is just as essential that food should be properly chewed and properly mascerated within the mouth as it is that it should be properly mixed with gastric juice within the stomach. It is just as essential that the food should be kept in motion and thus be thoroughly stirred within the stomach and not too long retained within the stomach and not expelled from the stomach too soon as is any other part of this complex process. Also of equal importance is the constituent composition of the various chemical mixtures. In other words, we must have pure, healthy saliva and gastric juice, pancreatic juice, etc. This is a chemical shop in which something "just as good" will not do. The laws forbid it, the laws of physiology and the laws of life, and these are laws that are always enforced, and from which there is no appeal. Of course, extraneous circumstances may exert a powerful influence on a function like digestion. Fatigue, fear, grief, worry, over-anxiety, will all play their parts in disturbing and interfering with the proper action of such delicate organs as those which are involved in the processes of digestion. Bad food, bad cooking, and bad habits of eating all play their part. Personal idiosyncrasies must be taken into account, some individuals being unable to digest certain articles of diet which can be easily digested by others.

Notwithstanding the apparent complexity of the processes of digestion they constitute a perfectly normal function and one which should occasion us no surprise; it is one with which we should all be familiar, and our surprise should be at the inability of an individual to perform this ordinary every-day function. In other words, a healthy individual in normal circumstances and environment, with good and wholesome food to eat, should be able to digest this food and not be like Carlyle, that hero of dyspepsia of whom it was said, "Every meal was a drama and every digestion was a tragedy."

Recognizing as we do that normal digestion can only be carried on in a healthy individual, who has organs capable of normal function, we should realize that the converse of the proposition is true. We should be quick to recognize the significance of indigestion, we should be ready to realize what indigestion means. Indigestion should at once suggest to us an unhealthy individual; it should suggest to us the fact that one or more than one of his organs may be diseased. Structure and function bear a very close relation to each other. We should not expect a healthy structure to be guilty of an abnormal function.

This brings us pretty close to the real subject of this discussion, namely, to the

surgical aspect of indigestion.

A surgeon should be an idealist, his aims should be high. We should not be content to treat but not cure indigestion. Given a case of indigestion, we should seek the cause, we should remove it, we should restore the sufferer to health. Any functional disturbance of digestion, that is to say a disturbance of function not dependent upon a mechanical lesion within an organ, should be capable of remedy and regulation by careful attention to hygienic rules, such as proper rest, freedom from worry, proper habits of thought, proper food to eat, proper manner of eating. One should not eat too fast, one should properly chew his food, one should not dissipate and waste his energies in chewing gum, not only because of the indecency of the performance but also because the salivary glands should be reserved for their important role in the function of digestion.

Given a case of indigestion in which every attempt to regulate the functional disturbance has been without success, one should turn his thoughts and attention to the dis-

covery of its cause in actual structural disease of one or more of the important organs involved. In other words, we should follow the advice of Sherlock Holmes, "having looked for all the improbabilities we should look at some of the probabilities. Many cases of chronic indigestion and dyspepsia are caused by an actual disease of one or more of the important organs which normally take part in the process of digestion. The principal causes of indigestion in this connection are chronic appendicitis, gall stones, and ulcer of the stomach.

We all know what great advances have been made in surgery since the days of antiseptics and especially during the more modern era of asepsis or clean surgery. The most important knowledge that we have gained concerning the normal and the abnormal anatomy and physiology of the abdominal organs has been obtained at the operating table within the last ten years. Prior to that time our supposed knowledge had consisted of conjecture and illogical conclusions based upon imagination. modern surgery we have been placed in a position to know very accurately, and as the world famous surgeon Mayo has aptly expressed it, "Surgical invasion of the upper abdominal region has gradually enabled us to replace theory with facts, and fallacious clinical observations have given way to actual demonstration."

There is a very close association and corelation between the stomach, the small intestine, the liver with its bile ducts, and the pancreas. This is true embryologically, physiologically, and pathologically. is such a close association in the functions of these various organs that one is more or less dependent on the other, for the proper performance of its duties. It is also true that disease of one of these organs may produce a train of symptoms very similar to the symptoms produced by disease of another of this group. For instance, symptoms of disturbance of the function of the stomach may be produced by a chronic appendicitis, or by a chronic disease of the bile passages. But there are certain symptoms which taken collectively or separately, should suggest to us the fact that there is either a chronic appendicitis, an ulcer of the stomach or duodenum, or chronic disease of the bile passages, usually in the form of gall stones. If a patient with these symptoms is a sufferer from one of

these diseases, his relief will be found in surgery and in surgery alone. This is positively true of chronic appendicitis and of gall stone disease; it is nearly always true of duodenal and of gastric ulcer, but of course there are cases of ulcer which may be permanently cured by hygienic treatment

The point I wish to make is that every case of chronic indigestion and dyspepsia has a cause; that the cause should be sought and removed; that the patient should be Indigestion and dyspepsia are but cured. symptoms, they are not diseases. In themselves they are annoying and uncomfortable, but of themselves they are not dangerous nor disastrous, but the disease of which they are the symptoms is often dangerous and should always be cured if cure can be accomplished with reasonable safety.

While patients do not die of indigestion, per se, they may die from the disease of which indigestion is the symptom. But we may go further than that and say that in the majority of cases which are fatal owing to some disease which produces indigestion, death is not due to that disease itself, but is more often due to some complication or to some secondary disease which has been induced and made possible by the lack of nutrition, and the lack of resistance power which is always present in a sufferer from a chronic indigestion. How often is this true of tuberculosis. Think of those friends and relatives whom you have lost, and see how many died of some such disease as consumption which has been preceded for many months or years by some form of chronic indigestion which has sapped the strength of the individual, so that he or she has become a prey to this ever prevalent infection.

Of course, in a large proportion of cases, indigestion is the result of purely functional disturbances, or of acquired tendencies, and of course the majority of cases of indigestion are not due to a direct and classic lesion in one of the important organs of the digestive tract, but our increasing knowledge is ever taking away from the lists such functional disorders as the so-called nervous dyspepsia, etc., and we are learning to place them where they properly belong, for we are learning more and more of the actual diseases of the alimentary tract.

This is a big subject and we must omit a great deal, so we shall hasten at once to the consideration of some of the surgical aspects of indigestion, and for illustrations I shall take the three diseases which are the cause of most of the cases of chronic indigestion, always excepting those cases which are purely due to functional disturbances or which are secondary to some other disease, such as Bright's disease, heart disease, etc. The three surgical diseases to which I shall call your attention, are, (a) chronic appendicitis, (b) gall stones and disease of the bile system, and (c) gastric and duodenal ulcer.

Before going into the details of each of these diseases, let me enumerate certain symptoms which are common to all of them. These symptoms are: pain, abdominal discomfort, a sense of distension, tenderness on pressure, eructations of gas, eructations of acid or sour fluid, and vomiting. Of course added to these we have lack of nutrition and emaciation in many of these patients, and nervousness and neurasthenia.

It is not necessary for our present purpose to go minutely into a description of the symptomatology of indigestion. In a broad sense it is sufficient that we recognize the fact that normal digestion is performed without symptoms, and that any of the above symptoms must be indications of an abnormal process. Pain is due to distension of one of the organs, with stretching of the nerves or to collicky spasmodic contraction, when it is manifested in the form of cramps. In cases of chronic indigestion, pain is not usually severe. Of course it is a very different matter when we come to an acute destructive disease such as acute appendicitis, acute perforative peritonitis, etc. Abdominal discomfort and the sense of distension are usually due to actual distension of the stomach and intestine by gas, the result of fermentation. distension by gas may be quite localized to one portion of the intestine, due not only to fermentation but also to sluggishness of the bowel with more or less stagnation of its contents.

Tenderness on pressure is an important symptom, and it usually means what it suggests, namely a sore or an inflamed tissue in the region where the tenderness exists. Eructation or belching up of gas of course means that there is an undue amount of gas in the stomach. Eructation of acid or sour fluid from the stomach of course means an irritability of the stomach and an excess of gastric juice and usually means an excessive acidity of the gastric juice. Excessive acidity, or hyperacidity,

is a very important condition and one that has been completely misconstrued until recent years. It produces many symptoms of stomach trouble, such as some of those which have just been enumerated, and it also produces spasm of the muscles at the outlet of the stomach, resulting in a retardation in the flow of its contents from the stomach to the duodenum. It will also result in actual inflammation of the stomach, going on to eroson or ulceration. Until recently it was thought to be due always to some disease of the stomach, but now we know that in the majority of instances it is due to chronic appendicitis or to diseases of the bile ducts. Most cases of hyperacidity are due to chronic appendicitis. Vomiting is a complex act more or less reflex in its character. It may be due to the presence within the stomach of irritating and incompatible substances, such as undigested and fermenting food, or some other form of emetic, but very often it is entirely reflex, and is due to nerve irritation, the result of disease in some other portion of the abdomen. I recently operated on a patient who had vomited several times a day for over a year. a large, inflamed removed appendix, which was the sole cause of her trouble. She has not vomited since the operation, which was more than two years ago.

There are some special symptoms which are indicative of disease of the stomach or duodenum and which are not to be ascribed to gall stones or disease of the biliary tract, nor to appendicitis. The most important one is the presence of blood either in the material vomited or in the movements. Such blood, usually minute in quantity, is a more or less constant evidence of gastric or of duodenal ulcer.

Now it is not necessary nor is it best, that I should attempt to make you familiar with the diagnostic signs and symptoms of these diseases. Your physician is the one to whom you must apply, but, I want you to go to him with the knowledge of the fact, and impressed with it, that chronic indigestion is not a normal condition, and that the vast majority of cases are susceptible of cure, I will not say treatment, for in the past there has been too much treatment and too little cure. If a case of chronic indigestion cannot be cured by proper regulation of diet and by properly following the rules of hygiene, and if it is not known to be due to some such trouble as Bright's disease, or heart disease, one should have ever in mind the fact that a very large percentage of cases of chronic indigestion are due to some disease which is readily curable by a properly performed surgical operation.

Chronic appendicitis is a condition which is fraught with much danger and is accompanied by either constant or intermittent indigestion. The great majority of cases of chronic appendicitis are overlooked and are not recognized because the classic and well-known symptoms of acute appendicitis are lacking. Of course, chronic appendicitis may be evidenced by repeated attacks of more or less acute appendicitis, and then the diagnosis should be easy and the treatment should be obvious. There is but one proper treatment for appendicitis, be it acute or chronic, and that is a surgical operation. This is a question we have fought out long ago among ourselves, the physician and the surgeon, and to-day we stand united in the opinion that I have just expressed. By operating on cases of chronic appendicitis we save the patient the danger of repeated acute attacks and of all the complications which may result from more or less chronic invalidism and lowered vitality. In the hands of good surgeons the operation during the chronic stage, or during an interval in recurrent cases, is almost without danger. In a large hospital with which I have been connected for nearly twenty years neither I nor any of my associates have ever lost such a case.

When asked the question—"Is life worth living"—Sidney Smith replied—"That depends upon the liver." Let us now consider the liver.

Of the disease of the biliary tract we may take for example all those various conditions which are the result of gall stones. Gall stones cause a very large proportion of the cases of chronic indigestion. After forty years of age gall stones are a very common occurrence. They are found in about one individual in ten. Formerly it was thought that the majority of cases of gall stones did no harm and produced no symptoms. This was a mistaken idea. Undoubtedly every gall stone is producing more or less harm, and is always potential of great harm, and undoubtedly every case of gall stones has symptoms. We are not always wise enough to recognize them. The vast majority of cases of gall stone disease do not have severe symptoms and do not have those symptoms which used to be recognized as the classic signs of gall

stones, namely, pain, colic, vomiting and jaundice. Perhaps the only sign of gall stones may be a hyperacidity of the stomach juices, or a certain amount of abdominal discomfort, or a sense of distension, with eructation of gas. These patients are often not emaciated, but rather overweight. As Deaver expresses it, "fair, fat and forty, and belches gas," would describe many of these cases. There is no cure for gall stones except a surgical operation, and a surgical operation for gall stones is a comparatively simple procedure, and in the hands of a competent surgeon is a safe one, provided it be undertaken at a time when severe complications have not resulted from undue delay. All cases of gall stones are simple in their nature during the early stages. Most of them become complicated and complex later on. Every case of gall stones should be operated upon unless the patient has some peculiar condition or disease which would make an operation un-

There is a wide difference of opinion today in the medical profession on this point. All surgeons and all physicians who are thoroughly familiar with the pathology of gall stone disease are agreed as to the wisdom and necessity of operation in these cases. But unfortunately there are some doctors who have not kept pace with the progress in this particular field, and still hold to the old tenets which were based on lack of knowledge. They have not followed their patients to the operating table and have not seen the facts laid bare.

There is one fact which would demand operation in every single case of gall stones, if there were no other reason, and that is that every case of primary cancer of the gall bladder and of the bile ducts has been preceded and undoubtedly caused by the irritation due to gall stones. It is reasonable to assert that if every case of gall stones were operated on and cured during the early stages there would be no such thing as cancer of the gall bladder and the bile ducts. But there are many other reasons why every case of gall stones should be operated on. The complications which arise from neglected gall stones are too numerous for me to mention at this time. The deaths which take place from gall stones are nearly always in cases which have been long neglected and in which the pathological condition has changed from a simple one to a complex and complicated one. The danger lies in delay.

Let us now consider chronic ulcer of the stomach and duodenum. They are so nearly allied both in their anatomical site and in their symptomatology and treatment that they may well be considered under one head. There is one great difference between them, and that is the fact that duodenal ulcers do not usually or frequently result in cancer while gastric ulcers are so constantly found as a cause of cancer of the stomach that they are rightly considered as a pre-cancerous condition. In the Mays's large clinic it has been found that 70% of cancer of the stomach has been preceded and undoubtedly caused by a chronic ulcer.

Gastric and duodenal ulcers may produce any or all of the symptoms common to chronic indigestion and they have certain special symptoms which distinguish them. Among these are hunger pains, i. e., pains produced by fasting and relieved by eating, and the presence of blood in the stomach contents or in the stools. In speaking of gastric ulcer in this connection we are not considering those cases of acute superficial ulcers which occur in young persons. These are superficial in their character and tend to spontaneous cure. The ulcers we are talking about are of a very different char-They are hard, indurated, deepseated, they are chronic and do not tend to get well. Their tendency is to vary in severity, so that there will be periods of apparent intermission, but their tendency is really toward chronicity, and they constantly threaten the patient with some serious complication, such as severe, or fatal hemorrhage, perforation with fatal peritonitis, and finally, in an unknown proportion of cases, they result in 70% of cancers of the

Every case of gastric or duodenal ulcer should be cured. Medical and hygienic treatment should first be employed and given thorough trial, but if improvement is not progressive and if cure is not complete, and if recurrences take place after apparent cures, the case should be recognized as a surgical one and a surgical operation should be performed. skilled hands surgical operations for gastric and duodenal ulcers are very safe, and the results are extremely gratifying, nearly all cases being permanently cured. The results of medical treatment are very unsatis-It is not known nor can it be factory. known what proportion of cases are cured by medical means. Many a patient appears in the list of cures of several gastrologists.

so that each specialist may think that he has cured this case. Thus it may happen that one patient with an uncured or relapsing ulcer may appear as an example of cure in ten different lists,—one failure being reported as ten successes.

It is of the utmost importance that these gastric ulcers should be cured. By that I mean permanently cured. The reasons for this are many and should be accepted without dispute or argument. A gastric ulcer is a constant menace to its possessor. If it results in nothing worse it produces a condition of semi-invalidism. The patient may have a disturbance of the nervous system which may be marked by slight symptoms such as irritability, insomnia, etc., or it may go on to that dreadful state which is known as neurasthenia or nervous prostration. By imperfect nutrition and by reduced power of resistance, one of these patients is an ever ready prey to some such disease as tuberculosis.

But these are not the most serious sides of gastric ulcer. Gastric ulcer is the cause of many hundreds of deaths due to perforation of the stomach with an acute fatal peritonitis. And last but not least is the fact that every gastric ulcer is a potential cancer of the stomach. We do not know what proportion of them become cancerous but we do know that more than two-thirds of stomach cancers have their origin in gastric ulcer.

In a brief lecture like this it would be impossible to cover much of such an important topic. I have not even enumerated the various conditions and lesions which may produce chronic indigestion and dyspepsia. I felt that it would serve our purpose better if I confined my remarks to the three prominent examples of which I have spoken. After all, they are the three most frequent causes of chronic indigestion.

In summing up, I wish to re-state some important lessons which medical men have learned concerning facts which it is of the utmost importance that the general public should have a knowledge. Among these facts are the following:

First, that many of our preconceived ideas not only of digestion but also of indigestion were erroneous.

Second, that most of our actual knowledge of this subject has been acquired within the last ten or fifteen years.

Third, that the best way to study these phenomena is at the operating table on the living subject. In this way we study the pathology and physiology of the living and not of the dead.

We have learned that most cases of chronic indigestion have a definite cause in an actual lesion. We have learned that many of these lesions are of such a nature as to be readily curable by surgical operation but not curable by any other means. We have learned that we should regard these causes as ones of the utmost importance and that we should always seek for the cause, and having found the cause we should attempt to apply the remedy. And we have learned that in a very large proportion of cases

the only remedy will be found in surgery. By curing these patients in the early stages we will avoid the gravest dangers, for the most serious conditions are found in cases that have been long neglected. By curing these patients early we shall avoid innumerable deaths from perforation and septic peritonitis, and early cure of these conditions will prevent one hundred per cent. of the cases of cancer of the gall bladder and the bile ducts, and seventy per cent. of the cases of cancer of the stomach.

361 Park Ave., New York City.

GETTING IT OUT OF THE DOCTORS

In April, 1912, suit was brought against two noted surgeons of the German Hospital in New York City for leaving, after operation, two sponges in the plaintiff's abdomen. What actually happened was that the family physician later did a minor operation during which he used two pieces of absorbent cotton. It was those two pieces which the plaintiff assumed had been abiding in his abdomen since his first operation. Newspapers all over the country printed headlines telling how the fellow-bunglers had sewed up those two sponges within their victim—first-class copy. When the case came up for trial, it was proved that one of these alleged miscreants had not even been present at the hospital operation; that absorbent cotton is never used in the German Hospital for abdominal sponges; that the family physician had positively assured the plaintiff the cotton

he had used had never been inside the latter's abdomen, which he had, furthermore, never opened. The jury ended the suit of that G. P. (in medical parlance, grateful patient). Those surgeons have been harassed through two years and have had to engage counsel at loss to themselves; when their sole crime was having devoted their consideration and skill to a patient who was shown to have had not only one but four serious diseases—hernia, Bright's, diabetes and a heart lesion-and who. through their ministrations, nevertheless still lives. They were sued by that patient for ten thousand dollars. Medical history teems with accounts of such suits, almost always instituted by charity patients. Are there headlines telling of the issue of this suit? Hardly; where would be the news value?—Harper's Weekly.

What is satisfactory to reason is law to the will.—Kant.

It is difficult to reason a man out of an idea he has acquired without reason.

No degree of knowledge attainable by man is able to set him above the want of hourly assistance.—Johnson.

They that will not be counseled cannot be helped.

If you do not hear reason she will rap your knuckles. —Franklin.

Ignorance is the curse of God,
Knowledge the wing wherewith we fly to
heaven.

—Shakespeare.

Digitized by Google

THE FEEDING OF INFANCY AND CHILDHOOD.

By Joseph Popper, M. D.,

Attending Physician to the Infant Welfare Station, Lebanon Hospital.

THE subject on which I have the privilege of addressing you this evening is one which would require much more time to cover fully than is at my disposal. I can only hope to emphasize certain practical points which I trust will enable you to care more intelligently for your babies and children.

It is not my purpose to make all of you feeding experts, desirable as that would be. I shall feel satisfied if my lecture this evening will help you to carry out your doctor's orders with discretion.

Right here I should like to plead with you to go to your doctor when the child is well and let him tell you how to keep him well. See your doctor regularly as often as necessary to get proper advice. It is a rational and an economical way to conserve the health of your children. It means spending the "ounce of prevention" to save the "pound of cure."

We owe it to our children to give them a proper start in life, and certainly the least we can do is to give them a healthy body.

We shall deal mostly this evening with the child in its first few years of life, and nothing is of more importance in our early existence than proper nourishment.

Before taking up the subject of feeding proper, let us briefly consider a few fundamental principles.

In the first place, what is food? Food is anything we eat or drink for the purpose of nourishing the body. The human body has been likened to an engine which requires coal and oil to keep it working. The body differs, however, in that in addition to requiring food for energy, we require it as well to repair the continual wear and tear of the various parts of our system, and also for growth. This latter requirement is, of course, most evident in infancy and childhood.

There are three principal constituents of food in general, namely, Proteins, Starches and Fats. Water and Salts are also important as food, but they are not considered as such in the same sense as the substances mentioned above.

By protein is meant such food, for example, as eggs and meats. This food constituent is the most important of the three, for without it human life cannot be sustained very long. It is the proteins that provide for the repair and growth of the body.

The starches and fats are important principally as heat producing elements. They provide for the energy of the body.

Now, we require all of these elements in more or less definite proportions for proper nutrition. How then do we know how much of each to take?

Nature has very well provided the grown person with what we call an "appetite," which more or less automatically selects the proper quantities of these food constituents. The infant, however, not being endowed with discretion, and not being physically able to use its selective appetite if it had one, must needs depend upon the grown folks to be fed. Here again Nature foresaw that the average mother could not be depended upon to select the proper food for her offspring, and has therefore prepared a food already mixed with the proper proportions of the various food elements, which we call "Human," "Mother's" or "Breast" milk.

BREAST FEEDING.

Human milk is therefore a perfectly natural food for the baby, and is at the same time naturally perfect. The only fault I have to find with it is that it is not entirely "fool-proof," so that, when improperly given, it may be the source of much harm.

That breast milk is the ideal infant food cannot be emphasized too strongly. I need only tell you that the majority of deaths in infants occurs in the bottle-fed, to make you realize how important breast feeding is. Many an infant's life has been saved from death due to pneumonia or other severe illness, only because of the breast feeding keeping up the child's resistance.

Physicians are sometimes consulted by mothers for the purpose of weaning their babies early, the sole excuse being that nursing interfered with going to matinees, afternoon teas, suffrage meetings and card parties. I am happy to say that within recent years the number of such mothers has been steadily reduced.

WHAT AFFECTS MOTHER'S MILK.

Often enough the desire to wean comes because the baby does not seem to gain much on the breast. At the same time one finds that the mother has been undernourished due to abstaining from various articles of diet for which she has a great appetite, and which, forsooth, was forbidden her by her neighbors or relatives as being harmful to the milk.

The fact is that a woman's milk is not at all affected by any article of diet that agrees with her; so that I advise all mothers to eat of anything and everything their

heart desires.

In general, it is important for every nursing mother to live on a good wholesome diet, containing about two quarts of milk a day in addition to her regular meals. Insufficient milk in the breasts often comes from insufficient nourishment on the part of the mother.

Now as regards various illnesses in the mother affecting the milk: it has been found that even some very severe diseases do not materially alter it; but of course, it is wisest to refer the matter of nursing during illness to your physician. Just because you have a little fever or feel out of sorts is no excuse for depriving your baby of its milk.

There is one condition in the mother that does seem to affect the milk very often, and that is nervousness. I find in practice that that is one of the most frequent causes of early weaning. A mother who is subject to great worry and is fretful and excited for any length of time will soon have her baby's stomach and bowels upset and losing weight.

The nursing mother must avoid worry and undue excitement. She must see to it that she leads a quiet, wholesome life with plenty of fresh air and sound sleep.

The familiar saying "a sound mind in a sound body," may be readily paraphrased for our purpose into "a sound baby in a sound mother."

NURSING HABITS.

In order to nurse one's baby successfully it is necessary to form certain habits in nursing from the very beginning.

Perhaps the most important habit to master throughout childhood is the habit of feeding regularly. That is particularly true of the nursing period.

Various specialists on feeding babies disagree as to the frequency of nursing; some believe in nursing every two hours, others every three or four hours, but all agree that whatever the interval of feeding, it should be carried out regularly.

Experiments have been performed to determine the number of feedings in twentyfour hours it is necessary for the average infant to receive in order to gain weight and develop properly; and it has been found that five feedings in 24 hours supply sufficient nourishment for that purpose. In other words, during the first few months of life when an infant is fed only on the breast, nursing once every four hours is all that is necessary. I have found in practice. however, that it is so difficult to get the average mother to nurse every three hours not to speak of every four, that I make it a rule to have my mothers nurse their babies every three hours for the first five or six months and then every four hours.

I am well aware of the fact that there are quite a few mothers who nurse their babies irregularly every hour or two and who nevertheless have healthy, fine-looking youngsters. That only goes to prove what a breast-fed child can stand in the way of abuse. You must remember, however, that for every baby that is nursed frequently and irregularly and is doing well, there are scores that are being made sick and buried.

The death-rate from diarrheal diseases has greatly improved within the last decade, owing to the greater prevalence of breast feeding and better nursing habits.

To be more explicit, then, the nursing routine that I advise is as follows:

For the first five or six months nurse once every three hours beginning at 7 A. M. The baby is awakened regularly for nursing if asleep, except after the fifth nursing at 7 P. M., when he is permitted to sleep until he awakens. As a rule the baby awakens at about one or two in the morning, when he is nursed. After that he is permitted to sleep until 7 A. M.

At about the sixth month the nursing interval is changed to four hours, beginning at 6 A. M. The same arrangements

are followed as outlined for the three hour intervals except that five feedings are given in twenty-four hours instead of six.

Between nursings plain boiled water or cereal water may be given. There is a custom among certain women, of using fennel tea instead of water or cereal water. I mention this custom only to condemn it; for fennel tea is slightly laxative, and it is hardly desirable to get the child's bowels

accustomed to physics.

Here also I should like to caution you against giving more than a single feeding at night, for you can readily understand how important it is for the mother to get There is therefore no sufficient sleep. more pernicious habit in nursing than to allow the baby to lie at the breast all night. For the same reason mothers should avoid

sleeping with their babies.

Now, at about the fourth or fifth month I like to begin to give my babies some zwiebach softened with boiled water and also some orange juice. At about the sixth month I begin to add some cereal well cooked and served with equal parts of milk and water. At about the ninth or tenth month the baby is allowed some beefjuice, broths, baked potato, apple-sauce and

prune pulp.

All that I have said thus far concerning the method of feeding does not hold true for all babies. In fact I am less guided by the age of a baby than by the weight and development. For example, if a baby at three months weighs 15 pounds, I do not hesitate at all at feeding him like a baby One should also of five or six months. remember that each child has a constitution of its own, with its own peculiarities, and one cannot feed all babies according to a single rule or method. "What is food for one may be poison for another" is especially true of babies.

SYMPTOMS OF UNSUCCESSFUL NURSING.

How shall we know whether the baby is doing well on the breast or not? There is really only one reliable indication, and that is the weight. If a baby gains steadily between one and two pounds a month, that baby may be said to be doing well. I would not have you understand, however, that if the baby gains less than a pound a month at a certain period, that that is any reason for taking him off the breast. It may only be a reason for improving the mother's milk.

In general there are three reasons for a baby not doing well on the breast, (1) the quality of milk may be poor, (2) the quantity insufficient or (3) the milk too

When the milk is poor in quality as in the nervous woman, the baby's stomach and bowels are usually deranged, and there is very little or no gain in weight.

The average baby should nurse about 15 to 20 minutes at a time. When the milk is deficient in quantity, however, you will often notice that the baby is never satisfied even after staying at the breast for one half to one hour.

A milk that is too rich, containing a high percentage of fat, may often upset a baby's stomach and bowels. This is due to the fact that the infant's digestive apparatus is too delicate to take care of rich food. It is often possible in these cases to dilute the breast milk and in that way correct the disturbance.

In any case where a baby appears not to be gaining sufficiently on the breast, 1 should like to caution you against taking it upon yourselves to change to a bottle. A baby should be given every chance to do well on the breast, and only on your physician's advice should you attempt to change to bottle feeding.

ARTIFICIAL FEEDING.

We shall now consider the subject of

artificial feeding.

Once it is definitely decided that a mother cannot nurse her baby at all or insufficiently, it becomes necessary to give the baby a food to take the place of the mother's The food that has been found most available is cow's milk.

Now it should always be remembered that cow's milk was originally intended as nourishment for the calf and not the human Therein lies the great difference between cow's milk and human milk. It is not alone that the various constituents of the milk exist in different quantities, but that these very substances altho chemically alike in both milks, differ in a manner which scientists have not yet been able to discover. There is a vital, one might almost say, a spiritual difference.

That this is so has been very easily proven. Cow's milk has been so modified as to be identical in composition with human milk, and yet a baby that would easily digest the human milk would be readily upset on cow's milk of the same composition.

In order, therefore, to adapt the cow's milk to the infant's need, it has been found necessary to modify it in certain definite ways. To go into a discussion of the various methods of milk modification would lead us into technical fields which are beyond the scope of this discourse. Suffice it to say, that in modifying milk, some authorities have used plain whole milk, others top milk, cream mixtures and so on. All of these methods are successful when properly carried out.

I have found, however, that the simplest method and the one that lends itself most readily to the intelligence of the average mother is the one that employs whole milk, diluted with water with the addition of a

sufficient quantity of sugar.

I shall not attempt to lay down any definite rules for modifying milk at various ages. My reason is that babies differ so much with respect to their ability to take various formulæ, that any rules so far from being at all definite are very indefinite. It is important to bear this fact in mind; for only then can you understand why it is that even in the hands of the best specialist, a baby will not always do well on a particular formula. Each child is a case unto itself, and therefore it is manifestly unjust to expect the average physician to strike the proper formula the first time he sees the baby.

PREPARATION OF MILK FORMULA.

Let us now consider the proper method of preparing milk for the bottle.

In the first place what milk shall we use? In the city of New York various grades of milk are offered for sale. The cheapest is Grade "C" or what is commonly known as "Grocery Milk." This milk is intended for cooking only. Those grades that are intended for drinking are known as Grades "A" and "B" and Certified Milk. The difference between the various grades of milk is one of degree of cleanliness. Thus, certified milk is the best, and grades "A" and "B" follow next in the order mentioned. Certified milk may be used raw, as delivered, for the reason that it contains very few germs, comparatively speaking. Grades "A" and "B" are pasteurized, that is, treated with heat to destroy a certain number of harmful germs, before put on the market. This would render the milk perfectly safe for use as delivered, were it not that commercial pasteurization is not entirely dependable.

Now, it has always been the impression among physicians as well as the laity that cow's milk is more nourishing when taken raw than when boiled or pasteurized. Recent experiments, however, have proven this belief to be a fallacy. Babies do just as well on good boiled milk as they do on raw, and better in many cases. That this is true, I have proven to my own satisfaction in the Infant Welfare Station at Lebanon Hospital where most bottle-fed infants are given milk which is brought to a boil. The vast majority of these babies are doing well. Perhaps the chief reason for my ordering the milk boiled is because the poor and even those in moderate circumstances cannot afford to spend 15 cents a quart for Certified Milk.

Having selected your milk, you require a certain number of utensils with which to prepare it for feeding. Briefly stated, you require an 8 ounce graduate, a funnel, a pitcher for mixing the food, feeding bottles and a tall cup for warming a bottle.

Cow's milk in order to be adapted for infant feeding must be diluted with water. In diluting the milk the energy producing elements viz., fats and sugar, must of necessity be reduced to too low a quantity for the infant's proper nutrition. We are therefore obliged to make up the deficiency by the addition of sugar and sometimes also by diluting with cereal water instead of plain water. Most of us have been accustomed to using milk sugar to mix with the food. I have found, however, that plain granulated sugar or a mixture of sugars known as Dextrin and Maltose are far superior for that purpose.

Now then, having prepared your milk, you next boil up some water or cereal water as the case may be, and then add your sugar to the water. You now have a definite quantity of milk and of water. These are mixed together and the whole divided into the required number of bot-The bottles should be cooled off and placed on ice. One of these bottles is then taken at regular feeding intervals and warmed up. Before giving it to the baby it is always well to test the temperature of the mixture by pouring a little on your Do not, as some women do, take the nipple into your own mouth to test the temperature. To say the least, it is an unsanitary habit.

As I have said before, I cannot at the present time go into a discussion of how

to prepare feedings for the various periods of the infant's life. I can only state that the total amount given at a feeding should on an average be one ounce more than the number of months of the child's age. Thus a child of five months should receive six ounces of any mixture at a feeding.

With regard to the feeding intervals and also additional food during the first year in bottle-fed babies, I may state that I follow the same routine as with the breast-fed.

Now, how shall we judge whether a bottle-fed baby is thriving properly on any particular formula?

At first thought, one might say as with breast-fed babies, the weight is the only criterion. But that is not all. another important consideration that does not concern us so much in the breast-fed baby as in the bottle-fed; and that is the ability of the infant to properly and completely digest his food. A bottle-fed infant who gains in weight and at the same time vomits and has green, mucous stools, must have that disturbance corrected or soon trouble will come. Vomiting and bad stools in a breast-fed baby, if only the baby gains in weight, is not nearly of so much moment as in the bottle-fed. In fact, that condition in the breast-fed can often be ignored with impunity.

A bottle-fed baby, therefore, in order to be considered as doing well, must gain sufficiently, and its stomach and bowels must be in perfect condition. This happy state cannot be attained by a single formula. The mixture may have to be changed once a month or oftener. Here again I must caution you against changing the formula without your physician's advice. The reason for that is obvious.

Also I must warn you against the well-meaning but at the same time trouble-bearing neighbor. I refer to the woman who comes to you with free advice. She will tell you that she has reared all her children on a certain formula or food, and that therefore your baby should do well on the same. She never tells you how many of her children she has buried on that food; and of course, she does not know that your baby and her children may have entirely different constitutions. Therefore, either avoid this adviser or thank her for the ad-

vice and follow the rational counsel of your family physician.

INFANT FOODS.

Now it sometimes happens that a baby for some reason or other, cannot thrive on any milk formula. We are then compelled to resort to some food other than plain cow's milk. For that purpose there are various foods on the market. For example, there is condensed milk, malted milk, Mellin's Food, Nestlé's Food, Imperial Granum and so on. All of these foods are of value in properly selected cases. However, if one were to be guided by the advertisements of these foods accompanied, as they are, by pictures of good-looking, healthyappearing babies, it would seem that simply to use this or that food, means the end of all feeding troubles. Would that that were true! And yet it is far from the truth. I know of many cases of babies' lives being sacrificed because the mother was lured into using a food which did not agree with the baby, by the advertisement or from having seen some other baby who happened to thrive on that particular food.

I would repeat, therefore, that all these foods are of value but only when properly

prescribed by a physician.

WEANING.

Having completed the feeding of the infant, we come now to a consideration of the feeding after the first year.

We must naturally begin with the all-

important subject of weaning.

When and how should a child normally be weaned? That is a question concerning which there seems to exist a great deal of uncertainty in the minds of most nursing women. This uncertainty comes from a natural fear to change from a condtion of "well enough" to one of unknown possibilities. This is especially true if weaning is contemplated during the summer months. Most mothers anticipate the so-called "second summer" as one would welcome disaster. Nor is this fear a groundless one. While the act of weaning during cool weather may be accompanied by upset bowels due to the cow's milk, there is no question that the condition is much more easily remedied than the same derangement occurring during a hot spell.

The reason for this does not lie, however, entirely with the act of weaning. The real trouble in the majority of cases is in the preparation of the substitute feeding. The milk may not be fresh or it may be given too often, or the baby may be permitted, as happens quite frequently, to take a few "tastes" from the table. Often enough the so-called "table" may be the floor the baby is creeping on.

In spite of all this, I am a firm believer in weaning at the end of the first year in the average baby. As much harm and often more is done to the child if allowed to nurse to take the bottle exclusively for fifteen to twenty months as some women do. Such a baby is usually pale and flabby and slow in general development. The reason for this is plain. The quality as well as the quantity of the breast milk is gradually lowered as the child reaches the twelfth month, and after that it is positively inadequate for satisfactory nourishment.

On the other hand it is a mistake to change from the breast to cow's milk too abruptly. Two weeks or even more should elapse before the breast is entirely taken

Finally, therefore, if weaning is done gradually, and the proper food is prepared carefully, your baby will have nothing to fear and the "second summer" will lose most of its terror.

FEEDING AFTER THE FIRST YEAR.

It is a significant fact that there are a very large number of deaths from diarrheal diseases in children over one year than in infants. At first sight this may appear strange. And yet when you consider how carelessly most children over one year are fed, the reason for the above statement becomes plain.

First of all it is important to recognize that regularity of feeding is just as important after the first year as in the infant. Likewise, care in the preparation of the various foods should be scrupulously observed.

During the second year four or five feedings a day should be given, and the following articles added to the milk diet: Cereal jellies, one egg a day, scraped beef, broths with stale bread or rice, orange, pineapple and prune juice and apple sauce, and some vegetables.

These vegetables, like spinach, cauliflower, asparagus, etc., should be well cooked and thoroughly mashed before serving.

During the third year, the same diet should be continued for only four feedings a day.

The diet from the third year on is gradually increased in amount but lessened in frequency, until at six years it becomes the regular table diet of the adult and only three meals a day. One should be careful, however, not to give too much of fried and of highly seasoned foods. Another important point is that water should form a part of every meal.

The child's desire for sweets is a subject that deserves consideration. To my mind it is a natural appetite and should be gratified. However, when indulged in to excess it will destroy the appetite for all other wholesome food. Therefore allow your children cakes and candies but in moderation. At the same time see that they do not indulge in candies made with various poisonous coloring matter.

In conclusion, may I be permitted to remark that if more attention were paid to the problem of the feeding of infancy and child-hood, both on the part of the medical profession as well as the public, the future generations will be a healthier and happier race.

787 Caldwell Ave., New York.

Practically every man has what is known in athletics as the "edge," or perfect fettle, but once a day. If he is to have it in the morning, when he faces problems of extreme importance, he cannot also have it in the evening, when he is expected to scintillate. Many have made the mistake of thinking that the evening effort was more consequential, and in order to be in trim for it have had to mark time mentally through the day.

When he is cast in the shade the optimist rejoices that he won't suffer from sunstroke, anyhow.

The victim of love at first sight seldom has a chance for another look.

Most of us get what we deserve, but only the successful will admit it.

THE THERAPEUTIC VALUE OF FOOD IN DISEASE.—A GENERALIZED BIOCHEMIC STUDY OF NUTRITION.

By Theodore William Schaefer, M.D., Kansas City, Mo.

Continued from the May Number

THE SLOW PROGRESS OF THE SCIENCE OF NUTRITION.

What is the present status of our actual knowledge of the important question of nutrition? It is a fact that the status of the science of nutrition has not made very great advancement within recent years and can be said to be practically at a stand-still. Here is the proper place to speak once and for all most clearly and emphatically that in regard to the subject of nutrition we are still groping insecurely in the dark! The entire domain of the subject of the study of nutrition and alimentation demands a complete revision! We are clinging too much to scientific traditions!

The patient investigator and lover of truth who has the spare time to do some thinking and who desires to broaden his intellectual horizon will find that the mass of mankind is held in bondage and swayed by matters of faith and dogma. There are but few who really think! Now, the above statement holds good in regard to philosophers, physicians, theologians, historians, scientists, lawyers and politicians—especially the latter! The inquirer, who desires further information when approaching scientific questions will find when investigating the reasons why the scientific world holds certain articles of scientific faith, will indeed encounter many surprises. He finds, on closer examination, that many of our views in the various departments of learning are based upon authority and tradition, and that we are living under the tyranny of scientific dogma. The great mass of physicians in our day accept blindly the stereotyped figures of Voit's daily rations of food for man as absolutely conclusive. The whole attitude of mind may be summed up in these words: Voit has said so and so, therefore it must be true. This has always been the attitude of mankind. An individual obtains a reputation for possessing a certain kind of knowledge not supposed to be possessed

by the general multitude. Therefore, what he says must be true. In medicine, the collateral sciences and in the other domains of knowledge the wildest flights of fancy have been accepted as absolute truth. We find that in all ages men have lived under the tyranny of dogmatic enunciation. Our concern is not with the past, but with the pres-It is a fact that the declarations of men accepted as leaders or as authorities have before now seriously retarded prog-Probably the most interesting aspect of the influence of authority in medical matters is to be found in the way in which we accept without the least critical inquiry our present accepted knowledge of the physiology of digestion as absolutely true. In recent years many of our conceptions of food and nutrition have undergone many great changes and we now begin to wonder why we ever believed what we did believe! In point of fact we could not have helped our-The most remarkable examples of the tyranny of scientific dogma and tradition are supplied by those cases in which certain statements are made to reconcile the glaring discrepancies. From what will follow it will require no great intellectual acu-men to perceive that Voit's theory of nutrition needs a considerable alteration.

In the due course of time some one else will tell the medical world that Voit was mistaken and that many of our accepted views of the physiology of digestion are actually antiquated and need a complete renovation, and then physicians will accept this as true, but only so if novus homo (new man) has as high a reputation science as his predecessor. In the superstition, past force and religious intolerance hindered the intellectual advancement of mankind. It is a fact that much progress in our day is hindered by the predatory interests of commercialism, politics, cowardice, the ignorance that dominantly ignores and the reactionary policy of the suppression of publicity. It is indeed true that old habits, customs, taste and tradition are often more powerful than real knowledge! Some of us are losing our faith in the old physiological dogmas enunciated by ex-cathedra authorities that have been sanctioned by time.

In the cultural history of mankind only a few determinative characters succeed in making themselves felt by the force of their minds and are thus enabled to make a deep impression on the rest of mankind. It is indeed a paradoxical fact that it is not a matter of great moment after all as to whether their ideas are right or wrong to those who do not think! Intellectually the world moves very slowly. When once a literary, quasi-scientific impressionist has succeeded in making his impress on mankind, his views prevail and become firmly established in the minds of the multitude. If wrong, it requires a long time to dislodge and refute old incarnated ideas through the most powerful and united efforts of greater determinative minds.

It is a fact that many of the mooted questions pertaining to nutrition are signally yet in doubt, and are still unsettled and will remain so for some time to come.

Notwithstanding the many isolated advances of our study of nutrition and our supposed and reputed knowledge of the articles of nutriment there are many very important questions in regard to the value of food and its bearing upon the intricate processes of nutrition that still remain to be solved. It is evident that those who know the situation (especially those who belong to the inner circle and command the requiand deeper knowledge of facts) know that we are devoid of the necessary, trustworthy, scientific and general equipment that permits conclusions that are deciding, certainty of action and requirements, and, therefore, grants a goal and a wide scope for the guidance of our political economy. Armed with the most approved modern technical appliances we are, however, confronted by the discouraging fact, to which attention was drawn by Ragnar Berg, an investigator in this new province of the study of nutrition, who recently made the unrefuted statement of the impossibility of procuring accurate analyses of the articles of nutriment. He says: "We do not possess a complete and faultless analysis of any of our articles of nutriment."

No single mind is at all capable of grasping the whole domain of knowledge comprising the vast field of foodstuffs. The work of any individual and the power of private institutions must be inadequate in proportion to the magnitude of the tasks of the present and future to solve the problems confronting us. In a republic we cannot expect much from the government, for political office holders are not, as a rule, men of science!

Only private institutions endowed with large funds, says Professor Henry Kraft, having numerous and reliable co-workers in the respective institutions at their disposal, could be at all able to retrieve in a rapid and united effort that which is possible and necessary and of which we have been lacking, because the sum total of the investigation in the domain of nutrition has drifted into a dead channel.

The old, conventional doctrine of Voit, that the daily amount of organic food ought to be supplied to the bodily mechanism of man should be 118 grammes of proteids, 500 grammes of carbohydrates and 56 grammes of fats is erroneous. According to the researches of our American physiologist, Chittenden, the Danish investigator, Hinhede, the German physiologist, Kraft, and a number of others, we can subsist comfortably on one-half of the quantity of proteids which are demanded by Voit and his school. The writer is convinced that the heat contributed by the combustion of the ordinary food supply for an active working man sufficient to maintain the nutritive equilibrium of its food value of 3,500 calories can be differently adjusted, instead of giving the nitrogen factor the almost predominating importance.

In his researches of the nutritional value of the different foodstuffs Voit experimented originally with just a single person and his experiments lasted every time but one day or perhaps two days. These figures were obtained, in the first place, from starvation experiments and from repeated and entirely insufficient determinations, lasting from one to two days on tissue changes performed on his laboratory servant and, in the second place, also from the estimations on the average of the daily consumption of food of other individuals, according to various other investigators. Voit found that the person upon whom he performed his experiments remained in a state of bodily equilib-

rium at 118 grammes of proteids; but it never for a moment occurred to him to use a less quantity of proteids. Had he used 59 grammes of proteids he would have observed that he could have obtained likewise 118 grammes of proteids. Herewith Gera satisfactory equilibrium as in the case with man science possessed its dogma of nutrition, in whose ban until this very day German people view in general its questions of nutrition. And what has been the result of this dogma of nutrition? A host of preventable disturbances of nutrition, beginning with the infant and later on ending in severe disturbances of nutrition, winding up in non-compensatory disturbances of metabolism, an infinite sum of ills, sorrow, sickness and lingering maladies that could have been prevented in a large measure, if one only possessed the requisite knowledge to nourish the body in a healthful manner.

It is not our purpose to discuss at length the reason why a theory of this kind should have survived a half of a century without being challenged and at the same time should have dominated science so long and effectually

The explanation consists in the fact that Voit himself was swayed and influenced by Liebig's old idea of the dominating conviction of the supposedly great rôle of the proteids in the life processes of nutrition. Voit's conclusions, therefore, were warped and his authority was so great that even his successors believed that they could not free themselves from them. Besides the explanation given above there is a deeper reason when Voit's views are followed to their last logical and ethical consequences, over which he, however, had no control. It is based upon the fact of Voit's views being taken advantage of in the course of time by the dominance of the selfish commercial motive in the vicious control of human events.

Almost everywhere in Germany one still clings to the tradition originated by Liebig, Voit and other physiologists that protein must form the most important nutritive constituent of the human food. In opposition to this contention, Chittenden has shown by numerous experiments which he performed on brain and muscle workers, such as professors, students, soldiers, athletes, etc., proving that man can establish a nitrogen equilibrium with less than half of the customary protein regimen. The modern human product of culture suffers too much

from over-nutrition; he eats too much meat. It is our conviction that the bodily demands for proteids have been overestimated by physiologists.

The agriculturist knows how he must cultivate and fertilize his plants. He engages an agricultural chemist to analyze the soil and from the results of this analysis he selects his fertilizing mixture. His sagacity is converted into good crops, and into ready money, says Prof. H. Kraft. He is familiar with the law of the minimum that was so ably enunciated by the celebrated chemist Liebig, according to whom the entire deficiency of one nutritive material that is so essential to the development and maintenance of plant growth or a diminution below the allotted limit occasion a general injury or even death to the plant. Should not this rule also have its application for the development and maintenance of the human body? Why, certainly, for right here the doctrine of human nutrition must extend its limits in an analogous manner and should not only concern itself with those substances that figuratively stand in the foreground of the bodily economy—with the proteids, fats and carbohydrates. The meritorious book of Liebig, that so thoroughly investigated the subject of mineral metabolism, says: "With a mixed diet the healthy person receives qualitatively and quantitatively, a sufficient and adequate supply of salts." most excellent and worthy assertion, but, unfortunately, not proven and erroneous. The meaning of "mixed diet," however, has a different interpretation in our day. physiologist Forster at one time coined the expression "nutritive salts." Had science given exactly the same attention in the very beginning to the fourth (mineral) constituent that it had given to the imposing quantity of protein, fat and carbohydrates, at the time when it became the reserved right of a few initiated, no doubt it would have become honestly known as the common property of mankind, because of its importance to popular health.

It is the conviction of the writer that this doctrine of Voit is erroneous. It is evident that we can be content with but one-half of the normal quantity demanded by him and feel, notwithstanding, just as well or even much better than when we follow the old rule. Indeed, we need not give too much attention to the proteid question that has been so adroitly and thoroughly commercialized in our day; should we live alone from nat-

ural, simple, nutritive substances, we will always receive an adequate quantity of proteids, and these economic and simple nutritive substances are on the whole probably the most healthful. The plant proteids, when properly prepared, can take the place of the animal proteids. There are millions of people who do not use animal food. Man as an omnivorous being is capable of living on an exclusive diet derived from the vegetable kingdom.

The exceptional tenacity of the Japanese soldiers fed on a diet poor in meat conquered the valiant Russian adversary nourished on a soldier's diet rich in proteid food.

The question whether a pure animal or vegetable food should be preferred, can be answered alike in many other similar cases, that the true position is evidently an intermediate one. As a pure animal food is unnatural for man, so is a pure vegetable dietary unsuitable and likewise does not meet the requirements of the human constitution; man is naturally dependent upon a mixed alimentation derivable from the animal as well as vegetable kingdoms, and this subject we will elucidate in another article in the due course of time.

(To be concluded.)

A HYGIENIC DECALOGUE.*

- (1) General hygiene: Rise early, go to bed early, and in the meantime keep yourself occupied.
- (2) Respiratory hygienc: Water and bread sustain life, but pure air and sunlight are indispensable for health.
- (3) Gastro-intestinal hygiene: Frugality and sobriety are the best elixir vitae for a long life.
- (4) Epidermal hygiene: Cleanliness preserves from rust; the best-kept machines last the longest.
- (5) Hygiene of sleep: A sufficiency of rest repairs aid strengthens; too much rest weakens and makes soft.
- (6) Hygiene of clothing: He is well clothed who keeps his body sufficiently
- *These ten maxims for preserving the health were written by Dr. Decornet of France.

- warm, safeguarding it from all abrupt changes of temperature, while at the same time maintaining perfect freedom of motion.
- (7) Dwelling hygiene: A house that is clean and cheerful makes a happy home.
- (8) Moral hygiene: The mind reposes and resumes its edge by means of relaxation and amusement, but excess opens the door to the passions, and these attract the vices.
- (9) Intellectual hygiene: Gayety conduces to love of life, and love of life is the half of health; on the other hand, sadness and gloom help on old age.
- (10) Professional hygiene: If it is your brain that feeds you, don't allow your arms and legs to become anchylosed. Do you dig for a livelihood, don't omit to burnish your intellect and elevate your thoughts.

MEDIAEVAL CONGESTION.

One has often wondered how in old times citizens, their women and children, endured the gloom, confinement, and inconveniences of a fetid mediæval town, hemmed in by lofty walls, battlements, and towers, with no access to open country unless through some four, or perhaps six, narrow gates. All this lasted everywhere in Europe down to the middle of the seventeenth century. Those of us octogenarians who have known Avignon, Nuremberg, Florence, and Rome before any buildings existed outside the ancient walls, can imagine what European cities were, at any rate down to the religious wars of the sixteenth century.

It seems marvellous that human nature could have endured to pass whole lives in cities which, except for their churches, abbeys, and guildhalls, were a network of dungeons, the like of which may still be seen at Orvieto or Carcassonne.

No doubt, there were no tall chimneys, no factories, steam-hooters, trams, or motors. But the real compensation, which enabled the people of Europe to endure for five or six centuries the horrors of their stifling cities within walls, was the freedom to pass in ten minutes on foot into a pure and verdant open country.—Frederic Harrison, "In Praise of Bath," Cornhill.

RURAL SANITATION.

RAT-PROOF YOUR HOUSE.

THE rat is an unnecessary evil, an index of unhygienic, slovenly conditions, of filth and of putrescence; it is really one of nature's scavengers. We ought to be civilized beyond the rat stage, beyond the stage when we are content to endure the rat; beyond the period which Mark Twain described in Huckleberry Finn, when rats were like to drop in for lunch almost any moment out of a hole in the corner.

Get rid of the rat. It can be done. It is simply necessary to separate the rat from his food supply. Rats can stand pretty nearly any hardship in nature, they demonstrate their will-to-live against the very hardest kind of luck. But one thing they can't stand—starvation. The only way to starve the rate is to keep him out of your house.

If you contemplate having a new house built demand in your building contract absolute rat-proofing. If you are about to repair an old house of frame, brick, rock, concrete or any other material you can have it rat-proofed economically, sanitarily and permanently.

Dr. French Simpson in a Report of the United States Public Health Service, explains in detail what must be done. He shows how buildings already erected can be ratproofed by the closure of all natural or accidental openings; how non-rat-proofed buildings can be remodeled, material being used impervious to rats; by the removal of material permitting rat refuge from yards, sidewalks, and passageways; by the removal of rat food and the protection of foods from rats; and last of all, by the destruction of rats by such subsidiary means as poisons, traps and so on.

Besides thus getting rid of rats you will get rid at the same time of a lot of repugnant insects, not necessary to mention, and which make their home comfortably enough in the rat's pelt.

Since rats are able to live between ceilings, in walls or roofs, can pass through from roof to roof by telephone and electric wires, and in other uncalculated ways, it is obvious that any plan for effective rat-proofing must take in every inch and corner of the building, from sub-cellar and basement to the roof, and the clotheslines thereof.

In rat-proofing a new building, if it is a frame structure it should be placed on a foundation wall not less than six feet thick, or brick or concrete, or such material as will be impervious to rats. This wall must be laid absolutely without a break around the entire building, not less than 18 inches beneath the surface of the surrounding soil (lest rate burrow under the walls and harbor beneath the building); and this wall must go upward flush with the inner surface of the floor above.

Floor joists must be imbedded in this wall, or the spaces between the joists must be filled in and perfectly closed, up to the wall level. Openings in the wall to admit plumbing or electric wires must be at once cemented to the full depth of the wall. Ventilation openings in the wall should be screened with cast iron gratings or wire cloth not less than 20 gauge nor greater than one-half inch. Into wall openings for basement doors these doors must fit exactly when closed, and should if possible be provided with appliances for automatic closing.

The ground area enclosed by foundation wall is most important of consideration. If no foods are to be prepared, stored or sold on the premises, this area must be covered with a layer of concrete at least three feet thick; and above this a floor of tongue-and-groove lumber should be placed, disregarding the dead space remaining between.

But if food stuffs are to be prepared in the house, for commercial or other purposes, the ground area must be filled in with earth or sand up within 3 inches of the top of the foundation wall, over which is then placed a layer of concrete as before, three or more inches thick; and upon this must next be laid cement at least one-half inch thick.

Ground areas must be concreted, because rats escaping through accidental openings subsequently made in the flooring will burrow and harbor in the ground beneath.

Whenever possible, and not prohibited by fire ordinance, basement ceilings should remain open and unsealed, so that rat refuge between them and the floor above may be prevented. If a finished ceiling is required, this should be made and kept rat-tight.

If expense prevents the installation of such rat-proof foundation as described, ratproofing of frame structures (if not contrary to building laws) may be accomplished by elevation, on free underpinning, not less than 18 inches above the surface of the surrounding soil; the ground area must here remain clear of lumber and debris, and clean all the time, lest a convenient, congenial and perfect rat harbor be provided.

Should chimney flues be carried by the wall from the basement to the roof and remain unused the openings should be closed with wiremesh, or stopped with a close fitting cover.

Roof doors and hatches must fit snugly and remain closed when not in use. Ventilators, skylights and unused chimney flues should be screened with galvanized iron wire cloth not less than 20 gauge nor greater than one-half inch mesh.

A careful inspection of the completed building is imperative; this is essential also following alterations or repairs. Any opening found sufficient to admit a rat will then be detected before it will become good for a rat population to flourish inside of.

Many city buildings are not rat-proof, though claimed to be so, because of the omission of screens to basement windows, to skylights and other roof openings; but principally by reason of the neglect of plumbers, electricians and others properly to close openings around electric wires, and pipes for conveying water, gas or steam.

Defects in the sidewalk must be repaired; and defective or absent lens lights in the sidewalks replaced.

Old broken or abandoned pipes make a fine highway for rats between the street or sewer and the basement; they must be stopped permanently with cement, if they can't be got rid of otherwise. The same must be done with openings around and within electric wire conduits. Chimney flues may convey electric wires, which rats like nothing better than to climb.

If rats have found refuge between ceiling and the floor above, this harborage can be destroyed only by removal of the entire ceiling. Defects or breaks in walls must be repaired; unfinished walls completed. Boxed toilet bases should be removed and solid foundations installed. Boxed plumbing should be opened up. Shelving and counters must contain no inclosed dead space. Food bins must be rat-tight, with close fitting covers. Dead space beneath show windows must be opened up or be rat-proofed by accurate construction. Remove all accumulated rubbish. Screen lower ventilators in elevator shafts with galvanized iron-mesh wire cloth.

Non-rat-proof buildings are all frame structures, with or without basements, and generally without foundation, floors and walls impervious to rats. Most buildings are of this class and they represent the principal obstacle to be overcome in the rat-proofing of cities and towns.

All such buildings should be remodeled and constructed with brick or concrete walls; but since the area wall in such cases is only for rat-proofing the foundation need not be disturbed, the area wall being erected just within (preferably) or without and against the old foundation.

This area wall should be of brick, stone or concrete, not less than 6 inches thick, extending not less than 18 inches beneath the surface of the surrounding soil, and upward until flush with the under surface of the floor above.

Should the building rest on a brick or concrete foundation an additional wall will not be required; but care should be used to see that the foundation wall extends entirely around the building. Wherever lacking in this respect or otherwise defective, the building should be repaired.

If floor joists rest on the top of this wall it should be continued upward between such joists until flush with the under surface of the floor above.

The ground areas or basement floors of such structures and upper floors and roofs, must go treated as for new buildings, being espetcially careful that the additional rat-proofing requirements are employed when such buildings contain foodstuffs.

Most rats can usually be caught under the front steps; remember this when remodelling.

Wooden floors, whether covering yards, sidewalks, or passage ways, when lying close to the ground, offer easy access to rats and form a convenient port in any of the storms to which rats are liable. Such wooden floors should be removed and the ground area left bare, or covered with gravel cinders or cement.

Rat food is just waste food or food refuse such as is thrown carelessly in vacant lots, or around garbage cans, or into such cans that are imperfect, or surplus food intended for chickens, or dropped in transportation or handling. The imperfect garbage can provides the most important rat food supply in the community; which cannot get rid of the rat until the imperfect garbage can be replaced. Rats can, by the means here described, be kept out of people's houses. But if a town wants to get rid of rats (which, being driven out of rat-proof houses, will all the more populate the non-rat-proof dwellings) a perfect garbage can system must be installed. This is a civic necessity.

Chicken yards offer a fine source of rat food; such yards should be either rat-proofed or abandoned. You can rat-proof

a coop or chicken enclosure by means of an area wall as described for frame structures; the ground area being covered with three inches of concrete and the side walls above the foundation constructed of wire cloth not less than 20 gauge nor greater than one-half inch mesh, to extend upward at least 6 feet. Chickens may range in the open yard, but must be fed only within the rat-proofed coop.

DIRTY PEOPLE AND DIRTY TOWNS.

The reason we have so many dirty towns is because there are so many dirty people. Some towns smell bad, but in such the inhabitants smell bad first. No town is in itself bad, it is the people who are bad. The town is a mirror. It reflects the people. A man who is clean in mind will be clean in person, he will have a clean front yard and a clean back yard.

A littered dooryard and a dilapidated house reflect a littered and dilapidated mind.

If an over-running outhouse borders the alley, it is because the instinct of decency and cleanliness is wofully absent in the owner or tenant, or both. The old proverb "Cleanliness is Next to Godliness," was changed by Governor Thomas Marshall to "Cleanliness is Essential to Godliness." No cleanliness, then of course, no Godliness. A dirty town is an ungodly town.

Some towns, yes many towns, have flies on them. They have flies on them because they are dirty. They are ungodly for that very reason.

A town may have several churches and many church-going people, but if it is dirty and stinks, it is ungodly. "By their works ye shall know them." Of course, how else can they be known? I sat on the porch of a house in a certain town one summer evening. It was hot and sultry. Every once in a while a gentle movement of the air would bear foul odors to my nose. It was the nearby outhouses I smelled. What kind of people are they who have such surroundings? Are they strong-minded and clean?

Think of people so disposing of their sewage as to poison the air and also make it possible for flies to transport unspeakable filth to their food. Why shouldn't such people have typhoid fever? They invite it, don't they? Surely, every man is the architect of his own misfortunes. Foul outhouses and flies spell typhoid. Why have them? The answer is simple. They who have them are not of a high order of mentality. They are weak in righteousness and impractical.

Shall the dirty be compelled by law to be clean? No indeed, not unless their dirtiness threatens the health and comfort of others. The scripture says, "He who is filthy let him be filthy still." Of course, what is the use to do otherwise. Compelling "he who is filthy" to be clean in person and premises, will not make him clean in mind and soul. He'll be filthy still. We must teach cleanliness to the unclean. Then if they become clean and stay clean, it is because cleanliness is in their nature. they stay dirty, it is because they are inherently dirty. Force won't change them. The reason we cannot make a silk purse out of a sow's ear is because it is a sow's ear. It is not silk. A naturally dirty man cannot be made into a clean man. It is because he is a dirty man. It is an iron law of nature that only those may be saved who can accomplish their own salvation. Dirty towns will exist just as long as dirty people exist. Dirty towns will disappear when clean people predominate. Slow town will always have flies on it.—Indiana State Board of Health.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

LEISURE HOUR WAS FOUNDED IN THE BELIEF THAT THE PHYSICIAN IS BUT HUMAN; THAT HE LOVES THE BEAUTIFUL IN THOUGHT AND SENTIMENT AS EXPRESSED IN LITERATURE, AND THAT HE IS AT TISIES SURFEITED WITH TECHNICAL MATTER. SHORT, CRISP CONTRIBUTIONS ON ANY OF THE SUBJECTS NAMED IN, THE SUB-HEADING ARE INVITED TO THIS DEPARTMENT.

THE FOURTH NEVER MORE GLORIOUS.

In the ten years ending with our last Independence Day forty thousand of our boys and girls and little children, as much as ten regiments, have suffered or died in those crazy mediaeval, heathenish celebrations of ours; and what must have been the holocaust in the six score years preceding! The deaths have been mostly from lockjaw and from dresses catching fire, whilst many of those who have not died have been dreadfully mutilated, crippled or disfigured for life—the faces of pretty little girls hideously distorted, blinding, eyes blown out, whilst others have recovered with minds so wrecked that they had far better have met death at the time of their infection or their maining. For a number of years the Journal of the American Association has been agitating against this wickedness. But up to 1909 its presentments made little impression; indeed there was much adverse printing about mollycoddles and lack of patriotism. Here is a specimen; "Boys like noise; let them make all they please. As long as the Fourth of July makes a supreme roar from the Atlantic to the Pacific, so long is the United States still young enough to hold its own, still young enough to think new thoughts." In 1909 a Boston journal disapproved the "drastic course" pursued in some cities as likely to cause a "popular reaction." The noisy Fourth served a useful purpose as "a safety valve; and it is unwise to sit hard on any such safety valve." They were for a shooting, whoop-er-up Fourth, in Boston. So that municipality warmed up and let the world know they were tumultuously aliveto the tune of five deaths and 167 people injured whilst three human torches served

for a fitting illumination, and recalled those mad bad days when Nero fiddled and Rome burned. They've learned a thing or two since in Boston; for last year they had no deaths but 16 injuries.

Well, the aforesaid medical Journal, having an altogether adequate grasp of the psychological principles of emphasis and repetition, kept sticking to its annual job until other agencies "took holt" in what pretty much everybody now concedes is the right spirit: the non-medical press (notably the Chicago Tribune) began to make copy of the reprints that were distributed by their esteemed professional contemporary; in the pulpit sermons were preached, especially on the Sunday preceding the Fourth. Associations, leagues, committees of men eager for human welfare, and of women pitying little children, began to take notice; and governments, both civic and state, have been seeing the light and have one after another been acting accordingly-a most important fact this latter, because the whole problem, duty and responsibility of converting a Slaughter-of-the-innocents Fourth into a Safe and Sane Fourth must in the last analysis be met by the constituted authorities, especially in cities. For the employment of death-dealing agencies is in America subject to municipal regulation. sult of this agitation has been that for 1912 there were in the whole United States: 41 killed and 947 wounded, as against 466 deaths and 3,983 wounded ten years ago. Another good thing is that formerly there were disastrous fires occasioned by our dunderheaded Independence Day proceedings; whereas last year our smoke eaters spent the day in comparative and blessed desuetude. The greatest decreases were in states where the agitation for prohibitive as compared with restrictive measures has been strongest. Of Alabama, Florida, New Mexico, The Carolinas, South Dakota and Maine no casualties whatever have been recorded.

In other years hospital lists of casualties came back filled; last year they were returned with but a few names or with the story "No cases this year; this city has had a sane Fourth." There were seven cases of lockjaw in 1912 as compared with 392 cases a decade ago. The lockjaw (tetanus) antitoxin, which almost absolutely prevents this terrible disease when employed within 24 hours of the accident, has no doubt helped to bring the record down to six fatal cases of this disease in our country in 1912. The agencies conducive to lockjaw have been, in the order of the frequency: blank cartridges fired from toy pistols, the giant firecracker, the toy cannon, firearms, powder igniting. Last year there were these Fourth of July deaths not due to lockjaw: nine from gunshot wounds; 8 burning to death from fireworks; 7 from powder bombs, torpedoes, etc.; 2 from giant firecrackers; 2 from cannon; 7 from blood poisoning, the

explosion of chemicals, etc.

Baltimore was probably the inaugurator of the Safe and Sane Fourth with her ordinance that " no person shall cast, throw or fire any squib, rocket, cracker, torpedo, grenade, or other combustible or explosive preparation within the city; Detroit, Denver, Minneapolis, St. Paul, Louisville soon followed suit; and pretty much every community in the land is likely to do the same this year.

And the new style Fourth is no longer a day of terror but instead of happiness and recreation for everybody, with no remorseful aftermath, and just as much patriotism as was ever evinced. The celebrations now are of music-of bands and of choruses drilled weekly beforehand by skilled leaders, and the singing of national airs and popular songs. There is generous display of dear Old Glory, which connotes the surer development of civic rightousness and better citizenship, in place of the rowdyism which has of recent years been rather rife in our cities.

THE GOOD CITIZEN.

The Good Citizen does not keep a dog. He does not wear side-whiskers. He keeps his children in the country or in the attic.

His conversation in the cars is not punctuated by the words "deal," "ten thousand dollars."

On the cars he doesn't stare at the poor woman's purse.

He does not act so religiously on Sundays that his neighbors hasten to embrace paganism.

He does not furnish his boy with an airgun and with letters-of-marque to prey upon the lives of his neighbors' children.

He rightly mistrusts his own boy more than any other boy in the street.

He never stands in the door of the elevator.

He does not run to you with trumped-up falsehoods about your boy.

Such is the Good Citizen. It is unnecessary to repeat, of such a man as this, that he does not keep a dog.—Puck.

WISDOM FROM CHINESE WOMEN.

She is dead indeed who walks around with a dead heart.

If you listen to the advice of every one the picture will never be straight on the

Let thine purse and not thine eyes tell thee what to buy.

You cannot expect the looking glass to reveal more than you put in it.

Mother and father first and wealth after. Mother's love is even in beasts, for the hungriest tiger will not eat its whelps.

Another few months of the underworld on the stage and vice will become a greater bore than virtue has ever been supposed to be.

Mrs. Murphy was getting the supper for the children on Saturday night when a young woman came to her door.

"I'm a collector for the Drunkard's Home," she said. "Could you help us?"

"Come around to-night and I'll give you Murphy," said the housewife as she went about her work.—Life.

NUGGETS.

(From The Sowers and In Kedar's Tents, by W. S. Merriman.)

Charity—This is an age of societies, and far from concealing from the left hand the good which the right may be doing, we publish abroad our charities on all hands. We print in a stout volume our names and donations. We even go so far as to cultivate an artificial charity by meat and drink and speeches withal. When we have eaten and drunk, the plate is handed round, and from the fullness of our heart we give abundantly. We are cunning even in our well-doing. We do not pass around the plate until the decanters have led the way. And thus we degrade that quality of the human heart which is the best of all.

The charity broker, the man who stands between the needy and the giver, giving nothing himself, and living on his brokerage, sitting in a comfortable chair, with his feet on a Turkey carpet, in his office on a main thoroughfare.

Who lies down with dogs gets up with fleas.

The barriers serve to indicate where we must pass.

The wise are those who ask much, and then take half.

No one can be wiser than destiny.

It is only up to the age of twenty-five that men imagine themselves to be rulers of the world.

When a woman loves a man she makes or mars him—there is no medium.

A Russian forest in winter is one of Nature's places of worship. There are some places in the world where Nature seems to stand in the presence of the Deity; a sunrise at sea, night on a snow mountain, midday in a Russian forest in winter. These places and these times are good for convalescent atheists and such as pass as unbelievers—the cheapest form of notoriety.

You women can do with us men what you like; but you must catch us while we're young.—John Boyle O'Reilly.

"A Watchword of the Fleet," by Alfred Noyes, in the Yale Review.

For purposes of recognition at night, a small squadron of Elizabethan ships, crossing the Atlantic, adopted as a watchword the sentence, Before the world—was God.

T

They diced with Death. Their big sea-boots Were greased with blood. They swept the seas

For England: and—we reap the fruits
Of their heroic devilries!
Our creed is in the cold machine.
The inhuman devildoms of brain.—
The bolt that splits the midnight main
Loosed at a lever's touch; the lean
Torpedo: "twenty miles of power";
The steel-clad Dreadnoughts' dark array!
Yet . . .we that kept the conning tower
Are not so strong as they
Whose watchword we disdain.

TT

They laughed at odds for England's sake!
We count, yet cast our strength away.
One Admiral with the soul of Drake
Would break the fleets of hell to-day!
Give us the splendid heavens of youth,
Give us the manners of deathless flame,
The ringing watchwords of their fame,
The faith, the hope, the simple truth!
Then shall the Deep indeed be swayed

length,
Nor this proud England lean dismayed
On twenty miles of strength,

Or shrink from aught but shame.

III.

Through all its boundless breadth and

Pull out by night, O, leave the shore
And lighted streets of Plymouth town,
Pull out into the Deep, once more!
There, in the night of their renown,

The same great waters roll their gloom
Around our midget period;

And the huge decks that Raleigh trod Over our petty darkness loom. Along the line the cry is passed From all their heaven-illumined spars, Clear as a bell, from mast to mast.

It rings against the stars:

Before the world—was God.

The past does not die; it only sleeps, and we carry it with us through life, slumbering. Those are wise who bear it gently, so that it may never be aroused.

JOIN THE "DON'T WORRY CLUB." By Ralph Wait Parsons, M.D.,

Greenmount, Ossining, New York.

I SUPPOSE there are few things in our daily existence which cause so many shadows to fall across Life's pathway as unnecessary worries.

It is a matter of experience that most of us have cares and responsibilities that we are called upon to endure, some of which seem to be, at times, almost more than we can bear.

However, generally speaking, it is not the ordinary cares and duties of life that we feel so burdensome to us, for we have gradually grown accustomed to them and have learned by daily experience how to cope with them; but it is the little, petty worries that we permit to annoy and vex us, that, only too often, leave ineffaceable impressions, both upon the disposition and character. It is then, these unnecessary worries, as has been already observed, that not infrequently impair our health and happiness, while they also tend to materially diminish our usefulness in life.

Not only are there indubitable evidences of the baneful effects that worrying has upon the mind and character, but there is the furrowed brow, the anxious and fretful mien, and, at times, the prematurely silvering hair, which betoken the inroads that undue mental agitation has upon a once comely, or perhaps beautiful face. "Some one has said that 'a woman cannot choose, whether or not, she will be beautiful at twenty, but it is her own fault if she is not beautiful at fifty."

Temperament is an important factor as to how different persons are affected by worry. Some individuals are either endowed with, or have inherited, a calm and sanguine disposition; they carry their cares and perplexities lightly and burdens that would be thought by many to be intolerable, are borne by them with unfailing equanimity. These are the people, who with Marshall P. Wilder, go "Smiling around the world." On the other hand, there are persons who

are of a melancholy and highly nervous disposition, who have, unfortunately, cultivated the habit of worrying about almost everything, either real or imaginary. This habit of worrying has developed so insidiously that they scarcely realize the serious influence it is having upon their character, until they become victims of a morbid mental process, which is a source of unhappiness and distress, both to themselves and to those about them. Indeed, there are those who take a morbid satisfaction in conversing with any one who will listen to them concerning the number and variety of the worries which beset them. Again, there are those who take a weird sort of comfort in borrowing trouble. Thus, if her child is found to be suffering from a mild attack of tonsilitis, the mother inmediately says, "Oh, I am sure he is going to have diphtheria." Or a child is suffering from a mild intestinal disorder accompanied by a slight fever, and the mother says, "I am sure he is going to have typhoid fever." Still another mother on seeing her child sustain a rather hard fall, exclaims, "Oh, I am sure he has broken his arm." Not only do such gloomy forebodings tend to make the mother unduly anxious and nervous concerning the little sufferer, but they also tend to frighten and demoralize him.

It will thus readily be granted that the harboring and brooding over the petty worries of life, with the resulting harmful effects upon both the mind and the body, is a matter worthy of serious consideration. Just as a grain of sand which gets into the bearings of a watch will damage its delicate mechanism, so unnecessary worries, when they are permitted to control our minds, and to cast shadows over our daily lives, tend to cause changes in the character which we, sooner or later, cannot fail to deprecate and which only the most strenuous efforts may serve to rectify. In other words, the habit of worrying, when it has been long indulged

in, is difficult to overcome, but efforts at self-control with a view to suppressing impulses to worry unnecessarily, will do much to favor a more hopeful state of mind. Friendly warnings should be given to those who begin to manifest the tendency to worry unduly, not to permit themselves to become annoyed by trifles and insignificant happenings, even if they are of a somewhat trying nature, and they should be urged and encouraged to obtain the mastery over their

unstable emotions, in order that they may ultimately possess due self-poise and self-control when times of real anxiety and adversity come upon them. Thus having acquired the requisite calm and equanimity of disposition and having endeavored to cultivate the faculty of "Looking on the bright side," they will be duly qualified to become members in good standing of the admirable and honored "Don't Worry Club."

HOW IT FEELS TO BE PRESIDENT.

Some day after I am through with this office I am going to come back to Washington and see it. In the meantime I am in the same category as the National Museum, the Monument, the Smithsonian Institution, or the Congressional Library, and everything that comes down here has to be shown the President. If I only knew an exhibition appearance to assume—apparently I can assume other appearances that do not show what is going on inside—I would like to have it pointed out so that I could practice it before the looking-glass and see if I could not look like the Monument. Being regarded as a national exhibit, it will be much simpler than being shaken hands with by the whole United States.

"And yet, even that is interesting to me, simply because I like human beings. It is a pretty poor crowd that does not interest you. I think they would have to be all members of that class that devotes itself to 'expense regardless of pleasure' in order to be entirely uninteresting. These look so much alike—spend their time trying to look so much alike-and so relieve themselves of all responsibility of thought that they are very monotonous, indeed, to look at, whereas, a crowd picked up off the street is just a jolly lot—a job lot of real human beings, pulsating with life, with all kinds of passions and desires."—President Wilson, at a dinner of the National Press Club, in Washington.

AT THE END OF THE ROAD.

This is the truth as I see it, my dear,
Out in the wind and the rain.
They who have nothing have little to fear—
Nothing to lose or to gain.
Here by the road at the end o' the year,
Let us sit down and drink of our beer,
Happy-Go-Lucky and her Cavalier,
Out in the wind and the rain.

Now we are old, hey, isn't it fine, Out in the wind and the rain? Now we have nothing, why snivel and whine?

What would it bring us again?
When I was young I took you like wine,
Held you and kissed you and thought you
divine—

Happy-Go-Lucky, the habit's still mine, Out in the wind and the rain.

-Madison Cawein.

SO SAY WE ALL.

Though they affirm
A deadly germ
Lies in the sweetest kiss,
Let's hope the day
Is far away
Of antiseptic bliss.
To sterilize
A lady's sighs
Would simply be outrageous.
I'd much prefer
To humor her,
And let her be contagious.

—By a GAZETTE subscriber, a doctor, too,

Eldest-born of powers divine, Blessed Hygeia, be it mine To enjoy what thou canst give,

who copyly prefers to remain anonymous.

And henceforth with thee to live.

—Cowper.

BOOK NOTICES.

THE INTERVERTEBRAL FORAMEN. An Atlas and Histologic Description of an Intervertebral Foramen and its Adjacent Parts, by Harold Swanberg, with an Introductory Note by Prof. Harris E. Santee. Illustrated by 16 full-page plates, none of which have ever before appeared in print. Chicago Scientific Publishing Company.

An interesting study and of valuable assistance to neurologists. Profusely and accurately illustrated as a guide to those doing

spinal surgery.

SUGAR AND SALT—FOODS OR POISONS? By Dr. Axel Emil Gibson, 520 Chamber of Commerce, Los Angeles, Cal. This is an important essay. The food-value of sugar is not sufficiently appreciated; it would "pay" the head of any family to look into that matter. And of course no human, any more than any other animal, can live without salt. Dr. Gibson writes most engagingly.

LECTURES ON DIETETICS, by Max Einhorn, Professor of Medicine at the New York Post-Graduate Medical School and Hospital and Visiting Physician to the German Hospital, New York. \$1.00. New York, Paul B. Hoeber, publisher.

ALL physicians can write prescriptions for drugs. How many can prescribe diets? In these lectures the physician will find a masterful exposition of the principles of diet and nutrition, the digestibility of foods, diet in health, in acute and in chronic diseases, diet regimes and so forth.

PHYSICAL TRAINING, two volumes: a junior and a senior course, by E. John Lolano, Indianapolis, Ind., The Brooks-Merrill Co. These excellent books have been adopted by the British War Office. Physical training, by gradual and easy steps, is important during the formative period of childhood and adolescence. The fundamental principle of the Lolano system is a progressive system of gymnastic exercises properly supplemented with recreative games; here is the basis of the "Junior Course." The "Senior Course" will certainly be advantageous to those who would be strong, healthy and alive to the joy of living.

ROCHESTER AND THE MAYO CLINIC, by George Broome Wiley, M. D. The Shake-speare Press, New York City. It was the Mayo Brothers who, as everybody knows, put Rochester, Minnesota, on the map. Dr. Broome tells us an entertaining, fair and unbiased story calculated to aid physicians to greater cures and larger incomes. A book that will accomplish these things is certainly worth having; and Dr. Broome appears to us to have made good.

FIRST AID DENTISTRY, by E. P. R. Ryan, First Lieutenant, Dental Surgery, U. S. Army; 80 illustrations; \$1.25 net. Philadelphia, P. Blakiston's Son & Co. This excellent book is for medical and dental practitioners and students; for nurses; especially for hospital corps men of the military and naval service; and for all who are called on to give relief from dental pain, when a dental surgeon cannot be found.

A WAY OF LIFE and MAN'S REDEMPTION OF MAN, by William Osler. These two addresses are printed in two volumes, neatly boxed. Paul B. Hoeber, publ., 69 E. 59th Street, New York; \$1.00 net. The first of these addresses was made to Yale students; the second is a "lay sermon" delivered in Edinburgh. Both are scientific, wise and most entertaining reading.

You never can tell. Many a man with lots of dough isn't well bred.

Spicy conversation should be handled gingerly.

Constant use will wear a thing out, even the constant use of a friend.

A prude is generally a young woman who knows entirely too much.

Some men seem able to govern themselves by nature, and others get married.

Troubles come disguised, as well as blessings. Many a chaperon has developed into a matchmaker.

There are times when the quitter and the fellow who never knows when he is licked envy each other.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M. D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

HEAT STROKE AND FRENZIED THERAPEUTICS.

THERE is some foundation, of course, for the common belief that serious disorders require heroic remedies. There is, however, always a limit to human endurance, and no matter how great the emergency which requires prompt and decisive treatment we should always place gentleness first and foremost among our guiding principles. Who has not seen a poor sufferer half dead from some sudden injury handled with a roughness that threatened the remaining spark of vitality which some well meaning blunderer was trying to restore?

Gentleness first. It is a rule that you will never regret following even though sometimes your treatment may seem lacking in speed and strength. Even though you must act quickly, your act must be preceded by thought. Be sure you are right, then go ahead, even if you have to go ahead the very next moment.

Gentleness first. The victim of a harrowing accident may also be a sufferer from some chronic disorder and your rough and ready "first aid" may really add the finishing insult to his poor body. Bad enough

to have a weak heart plus the shock of some sudden catastrophe, without having added to it the extra hazard of "emergency care" by some athletic hero who holds the record for punching the breath out of all contestants.

Heat stroke, now unfortunately coming into season, is an example of a fearful accident that requires prompt but considerate handling. There is no doubt that many a poor sufferer from this accident has met his death as a direct result of the treatment generously administered by his frenzied friends. Dr. Simon Baruch is authority for the statement that "plunging an individual suffering from heat stroke into an ice bath will often prove fatal if the heart is weak, while a bath at faucet temperature will frequently result in saving life."

When you meet your next emergency case do not spare any pains to give the sufferer a fair chance; but before you "go the limit" in your ministrations use milder measures and take a moment to consider what sort of a person you have as a patient and what degree of "treatment" he is likely to endure.

ORGANIZED NEIGHBORLINESS-"A STUDY OF EFFICIENCY."

Our readers are most fortunate in having the opportunity to study the paper by Mr. Richards M. Bradley, of Boston, which we present in this issue and the one following. It is in line with the efforts which we have been making consistently for years past to inform the public on the great problem of efficient home care for the sick, especially in families of moderate means. While other oracles are even now urging our philanthropists to raise vast funds of money in order to give to this class of people the highest grade of skilled nursing at the prevailing prices, we commend to the attention of the public this plan of Mr. Bradley by which an efficient service is being offered them at prices which they are willing and able to pay. Mr. Bradley approaches this problem from the business point of view, and has studied out a plan by which an adequate supply is furnished to meet a constant demand. It is a problem similar to many others which our laymen are continually meeting and solving in a business like way. As professional people, engrossed in our own professional duties, we need the co-operation of the business expert who knows how to conduct the markets to the mutual advantage of the buyer and the seller. Let us accept the help which the writer of this paper offers us and take another step in finding our way out of the perplexing situation which the nursing profession occupies to-day.

DANCE AND LIVE LONG.

Now that dancing is in vogue everywhere and all the time, we read with interest the words of Dr. G. Stanley Hall which were reported in the GAZETTE for June 1904. Was Dr. Hall speaking with prophetic insight into the next decade? Whether or no, he should be pleased with the way in which his doctrines are being exemplified after the lapse of ten years. This is a part of his pronouncement as quoted by us then:

"It is probable that man gets nearer his lost paradise when he is dancing than at any other time.

"All muscular effort is in rhythm, the

action and the reaction, but the climax of all rhythm is dancing—not dancing as it is known now, but dancing as it was done years ago. If a person is tired, he should dance a minuet; if apathetic, something faster.

"Dancing has great curative power. The best thing, the great thing, is health, which means holiness. The best kind of happiness is the happiness of being alive, and that is the spirit of the dance.

"I can't understand the apathy of some people. Men at fifty, sixty, seventy, and eighty ought to dance when there is dance music. Why, how can they help it?"

TANGO THERAPY.

Dancing is an inspiration and a stimulus, not only physical but social and cultural. So speaks Dr. G. Hepburn Wilson, in Health Culture. It is somewhat novel to find this medical man prescribing the dance for such physical maladies as cardiac degeneration, gastric debility and other disorders characterized by "lowered vitality." What is more to the point, the doctor gives his reason, and the therapeutic indications for certain forms of dancing. The tango is in greatest favor to "massage away adipose deposits hampering the heart action," and otherwise rejuvenate a failing organism.

In following Dr. Wilson's enthusiastic recommendations one is inclined to wonder if there is such a thing as too much dancing, for even the "tired feeling" that results from over exertion seems to side-step the dancer so to speak. Our doctor affirms: "The matter of fatigue is important; it deadens the mind and muscles, and creates depression; but while fatigue in gymnastics is usually depressing, the fatigue in dancing is inspirational."

On with the dance! Let the tango be unconfined. The poet and the doctor agree for once. Here we have rhythmical therapeutics in a form that is social and "in-

spirational."

TREATMENT OF MOSQUITO BITES AND BITES OF OTHER INSECTS.

TIMELY warning and advice on this burning question may save our readers from considerable loss of time and especially sleeping time during the summer outing. The following useful suggestion, which we have proven true, comes from Dr. Patrick Maloney, in the Journal of the American Medical Association:

"The bites of mosquitoes and various gnats, the stings of wasps, bees, etc., have often produced a considerable amount of pain and discomfort, and even death has resulted as a consequence of suc hstings in human beings. For some time past I have used iodine crystals in saponated petrolatum, 30 to 40 grains to an ounce. A few drops of this is rubbed over a

mosquito bite with magical effects. I have also rubbed it over parts stung by wasps of various sorts and sizes. The pain of the sting was very quickly relieved."

Other suggestions worth repeating are found in the Munchener Medisinische Wochenschrift:

Common remedies employed to prevent bites of insects and mosquitoes are camphor, peppermint oil, lemon juice, the oils of tar, eucalyptus, and lavender, creosote, carbolated vaseline, etc. Camphor is very effective but generally too volatile, and the following ointment is usually to be preferred:



If applied in the evening the characteristic odor still apparent in the morning. The only disis still apparent in the morning. The only dis-advantage is that some patients will complain of headache. Better results have been obtained by K. F. Hoffman with the tincture of Persian Insect Flowers which possess the advantage of being almost odorless. Bites may be aborted by the application of ammonia. Later, menthol or thymol, in 3- to 5-per-cent. solution, are excellent. Where there is apt to be friction from clothes, a collodion solution is often preferable:

Ol. Riciniaa 1.0 Gm.

A more permanent relief from itching may be obtained if naftalan be rubbed into the skin over the affected area.

From London comes a very pleasant prescription for the relief of the distress caused by wasp stings:

"Since wasps, lemons, and hot weather are three things commonly with us at the same time, the news that the juice of a lemon is an excellent cure for the sting of a wasp will be welcome. A correspondent in The Daily Mail gives the experience of a visitor at a Homburg hotel who was severely stung by a wasp. waiter produced a lemon, and the instant the juice touched the spot all pain ceased. The application of lemon juice was continued at intervals for ten or fifteen minutes, and nothing more was felt of the sting. Again in another instance the same man was stung on the hand, but the application of lemon juice wrought a perfect cure before one lemon was exhausted. The correspon-dent adds: 'The remedy is so sure and so simple that it ought to be widely known, and lemon juice can be applied to the lips, the mouth, and even to the throat, and when applied near to the eyes it is quite harmless as, although if a little lemon juice is squirted into the eye it produces considerable pain, there is no possible danger of permanent injury to the sight."

HOW TO USE FLOSS SILK.

D. W. BARKER, D. D. S., Brooklyn, N. Y., offers these very useful directions for cleaning the teeth with floss silk. We quote from his article in Oral Hygiene, and endorse his idea that such advice is much needed.

"For many years I have taught my patients the following simple method, which, if followed, has

proven entirely satisfactory. Pass the thread entirely around the tooth, get it well down to the neck of the tooth, cross the ends in front, draw it tight, and then pull first one end then the other thus wiping the entire circumference of the tooth. Treat each tooth separately, doing it before a mirror at first until familiar with the operation. When giving my patient the first lesson I use a black thread so it may be seen easier."

IMPRESSIONS OF AN AMERICAN NURSE IN TURKEY.

MISSIONARY physicians and nurses are usually far removed from the strife and competition that occupy so much of the time of those of us who remain at home. Work is plenty with them and their problem is to find more workers. Their experiences are marked by a freshness and enthusiasm that many of us would like to find in our own little fields. Miss Ruth Tavender, who left a prominent post in Hospital, Worcester. Hahnemann Mass., for the far off city of Aintab, Turkey-in-Asia, writes an entertaining letter to the Worcester Telegram, from which we borrow a few paragraphs:

"Aintab is a big city for this part of the world; population of 80,000, three-quarters Turks, Moslems, and the rest Armenian, Gregorian, with a handful of Americans thrown in. It is a typical eastern city, so more experienced travelers tell me, and is full of dirt, donkeys and dogs. The Koran forbids killing the latter animals and they

are plentiful, of a yellow mongrel breed.

"The streets are narrow, paved with big, uneven stones, and the gutters run along the cen-

ter.

"The camels and donkeys amble along, their drivers' thoughts apparently miles away and the poor pedestrian has to scramble to avoid being knocked down.

"From a little distance, the whole thing is attractive. We rode horseback to the top of one of

the near hills, and the minarets, white walls and covered bazars make an unusual picture.

"The buildings are of limestone, white-washed, and are all enclosed with walls. Ours at the hospital are about 15 feet high and two feet thick. The windows are always heavily barred, because of robbers from the mountains. The city police here are a farce. They go about at night, banging a big stick and blowing a shrill whistle, to scare off the robbers.

"Beside the hospital there is the girls' seminary, boys' orphanage and one for girls, all in charge of Americans with Armenian assistants. buildings are all of good size, with plenty of room and good equipment. The hospital now has 60 beds and there is a new wing being built to ac-commodate 60 more. Dr. Sheppard is the chief here and the only American besides Dr. Hamil-

"The natives are stoical about pain. They say "kismet" and let it go at that. The cases are consequently pretty bad when we get them. We are just swamped with work, but the worst of it falls on the surgeon. Think of how our young men at home are just crazy to operate and have to be content with scrubbing up. Then see the amount of work here waiting for some one with heaps of nerve, energy and skill. Can't you inveigle one out here? He'd love it if he cares

anything about the work.

"The doctor does the work of three men and with it all he is a keen sportsman, goes hunting once a week, rides horseback as if he never did anything else, and is one of those kindly men with a laugh like a boy's. He needs a helper badly to come and work into his place. The salary is waiting for some ambitious young man, but it would take a couple of years for a new one to work in, and longer to win the confidence of the people to anywhere near the extent that Dr. Sheppard has.
"If you could see the poor beggars waiting for

the chance to see him, and bringing their chil-

dren to him-he is like a father to them. He is absolutely fearless, rides all over the country alone, has been held, tied to trees, and well, all kinds of things have happened to him. I love to

get him talking about his adventures.

"Mails from home are very irregular because of the awful conditions of the roads. There are few really good roads, often just a track across fields and when it is rainy, the mud is something beyond description. You don't know mud there. I never dreamed that it could be as it is here, both in quality and quantity. But post days are big times in spite of delays.

"There is a splendid set of people here, workers, every one, no time for foolishness of any sort. When they get started they are well worth listening to. During the massacre here four years ago these men and women went about their regular duties, making a great show of confidence to keep

the natives from panic.

The experience that we meet with traveling about over the country and in big covered wagons like the prairie schooners of our West, would fill books. There is so much that is interesting and different, and I can say with Tom Sawyer, that it 'ain't no slouch of a job."

ORGANIZED HOME CARE FOR THE SICK.

RICHARDS M. BRADLEY, BOSTON, MASS., Trustee of The Thomas Thompson Foundation. Address delivered in Buffalo, N. Y., Mar. 21, 1914.

It is my privilege to bring before you an outline of a general plan of community organization for the care of sickness in the home, which it is hoped you may find of service in your undertaking to make social and civic betterment one expression of the faith that is in you.

The reason why I believe this matter will appeal to you as an opportunity of service, is this: Many of you have come to realize that, while great calamities by flood, fires or pestilence, rivet the public attention and set the people to demanding remedies, our greatest losses nevertheless come from the individual disasters that strike one home here and another there, crippling and destroying us in detail. We lose more in the aggregate by such things as tuberculosis and industrial accidents, than by fire, flood, conflagration, and pestilence.

Into the small homes throughout the land comes disaster through sickness, and cripples or destroys those homes. The aggregate amount of these disasters is vast, and a large part of them can be prevented or helped by better organization in our communities for mutual aid. Such organization is needed not on the basis of charity but on a civic basis of local organization to help our homes through their tight places.

I come here in the hope that you will lend the aid of your zeal, brains and money to the formation of a unit for the efficient handling of sickness in the homes of all the people, that will do pioneer work for the cities, towns and country neighborhoods of your land. There is much money to be got for pulling people up when they have fallen into a condition of helplessness and dependence. The work and money that will keep them from falling down will give ten times the value for one-tenth of the cost, and I hope you will devote some of your time and money to that purpose.

Within the last year two careful convasses have been made in this State covering an aggregate population of 17,000 people and embracing varieties of locations from the east side of Manhattan to Hill townships of scattered farm houses in Duchess County. There are two districts covered in Manhattan one on the east and one on the west side containing a little over 5,000 inhabitants. There were three farming townships in Duchess County and in the same county one village of 2,000 people and a ward of Poughkeepsie which happened to contain some of the most prosperous as well as some of the poorest and a due proportion of families commonly described as in moderate circumstances.

Digitized by Google

Duchess County generally contains the residences of some of the wealthiest men in the country and many of its residents are among the most able and public spirited. If therefore conditions were found as they have been found in this district showing grave defects in our methods of caring for the sick and helpless it is to be attributed not to any individual delinquency of that particular district but to some radical defect in our methods of meeting the problem and back of that to something that is out of order in our mental and spiritual attitude with regard to our duty to our neighbor.

If within a few years it has been possible that a woman go through the perils of childbirth with no attendance whatever in a house only a few minutes away from the residences of two or three of the richest men in the country and within easy reach of numerous other good citizens who are both God-fearing and generous; if such things as this could happen, it has not been because the people of this community were different from the rest of us Americans but because something within us is asleep, and because there are great forces capable of working for good that are unused and unorganized.

These canvasses were made largely from house to house, such houses as could not readily be reached being covered by enquiries at neighbors, physicians' offices and other sources of information. The enquiry was intended to find out over a reasonably large field exactly what had happened to the people in the way of sickness and what means had been taken to meet the exigencies and emergencies that sickness had brought about. The reason for making this enquiry was as follows:

We are coming more and more to distrust the results obtained in social and philanthropic work from individual and isolated agencies, and we are coming to feel the necessity of finding what bearing the individual effort has upon the whole situation and what relation that effort should have and does have to the other forces that are working in the same community. We are coming to realize that in social efforts we are all in the same boat and that no oarsman can properly pull as if there were no other man pulling at the same time. If our hospitals for instance are taking good care of only a small percentage of our typhoid and pneumonia cases, while a large percentage of all the cases in the community receive utterly inadequate care or no

care at all; then no matter how well these few cases are cared for we must respectfully call attention to the 80 or 90 sheep in the wilderness and give some of our aid and backing to those of our shepherds who want to get out after them.

If, moreover, owing to the utter lack of facilities for giving proper care in the home, our hospitals and asylums are crowded with patients that need not and often should not be there to the exclusion of cases that need hospital service and need it desperately it is then time for us to get together and get after the proper and comprehensive organization of home care both for the sake of ourselves and our hospitals.

If our cities are filled with hospital trained nurses waiting for jobs, if only our wealthy and our paupers get graduate nurse service while the great bulk of our people and the most valuable part of them must either be ruined by the cost of sickness or else put up with casual, imperfectly trained and often irresponsible service, then it is time for us to get together and see if we cannot make better and more business like use of the great mass of good material that we have to the benefit of all concerned.

Among the things found in the course of these canyasses which point to the above indicated conclusions are the following: A canvas of the cases of confinement in a community is one of the most useful to make for there is generally very little dispute as to the main symptoms of the case. The emergency is likewise one that can be foreseen and the methods taken to meet that emergency give a good indication of what the people of the community are doing to give proper care to the helpless in time of need. Out of 113 cases cared for in the homes of the Duchess County field of enquiry only one had the continuous care of a graduate nurse, 30 had the continuous care of practical nurses, only 18 had graduate visiting nurses, 7 had practical visiting nurses, 11 had midwives, 40 had merely the doctor and family, and 6 had no doctor and no care except the family. In addition to this there were 13 cases cared for in the hospital, chiefly due to a special exceptional endowment in one of the towns canvassed.

There was the strongest evidence that much of the care given was unsatisfactory and inadequate, and that many of the women were forced in a few days to take their daily occupations in a condition that made future trouble almost a matter of certainty. This I will remind you was the condition in a part of your state where it is by no means backward or remote, and is probably similar to conditions existing over a large part of the country.

The New York City canvass showed that in one district 92% and in another district 98% of the maternity cases were cared for in the homes and the average time of confinement was 9 days, undoubtedly indicating that a large number of cases were kept from work for very much less than this period.

This New York City report shows among other things that in spite of New York's great hospital facilities, even in such serious cases as typhoid fever and pneumonia, 70% of the deaths from typhoid took place at home and 85% of the deaths from pneumonia

Out of all the 17,000 population covered by these canvasses only 13 4-10% of the cases received hospital care, 86 6-10% being cared for at home. In Duchess County practically all of the numerous cases of infectious diseases distributed their germs from the home, the county being apparently entirely devoid of public isolation facilities.

Perhaps I have wearied you with too many figures but my object in giving them has been to show that we cannot meet the exigencies that exist in any community including your own by hospitals alone or by graduate nurses alone but that we shall have to use both our hospitals and our graduate nurses in co-ordination with other organized forces if we are to make any pretense of handling the whole problem of sickness. The problem is one of vast proportions although it is harder to realize than are many lesser ones, because it represents continuous conditions and scattered troubles.

When disaster comes into the small homes of the country striking now here and now there, destroying or crippling one after another, we hardly notice it, although the aggregate loss may be 100 times greater than that coming from some flood or conflagration that opens our hearts and our pockets. We are a people that thinks more easily in head lines than in statistics.

I think however that there are many of you who do realize how great and important a problem this is and that I can possibly help you in meeting it by describing the attempt made to meet it in Brattleboro, Vermont, and the general plan of action

that has resulted and has been applied elsewhere.

I will say that the same method has subsequently been tried in larger communities and that the evidence appears to be conclusive that it meets successfully the wants that exist in sickness wherever there are independent families of moderate means whose requirement is good service without high charges.

Brattleboro is a town containing several manufacturers and is likewise an agricultural centre, thus possessing a peculiarly representative population. Its people are mostly neither very rich nor very poor, and although there are no peculiar advantages to make life exceptionally easy, there are at the same time very few families belonging to the permanently dependent class.

Probably five-sixths of the people in the United States, in country and city, are much the same kind of people and have practically the same problems as most of the people of Brattleboro, Vt. They are people who want the best chances available to do for themselves and their families. They welcome and make use of all schemes for mutual aid and civic advancement, such as schools, libraries, savings banks, fraternal orders, and other insurance facilities. They believe in generous civic and educational endowments open to all on an equality, and believe in the mutual help which neighbor gives to neighbor, and equal gives to equal.

They are people, however, who have very little use for those forms of charity which the generous and prosperous accord to the down and out, but on the contrary ask for themselves and their families merely a reasonable opportunity to remain outside of the down and out class, together with a fair and equal chance to work for the prizes of life.

I was given charge of a fund available for use in that community and I undertook the task not as a professor of medicine or philanthropy, but merely an ordinary business man whose regular occupation is the care and management of real estate. As was natural, I turned a considerable part of this fund to the relief of trouble from sickness, and that is how I got involved in this problem.

A visiting nurse was started and a hospital was built and supported, which turned out graduate nurses from the training school.

These institutions did excellent work so far as they went and seemed on their face to be the proper and usual prescription for meeting the needs of this and other communities.

When the task of establishing them was completed, I waited with natural satisfaction to observe the results and was surprised and disappointed to find that much of the relief expected was not produced. I was sure of this, for I happened to be in a position where I could get an exceptionally good idea of not only the many cases that were relieved by these agencies, but also of the many which were not and could not be so relieved. Without troubling you with details I will try to give you an idea of what I found there and what was found elsewhere by the canvasses of which I have told vou.

From eighty to ninety-eighty per cent. of the serious cases of illness (the rate varying with the localities) are cases cared for in the home and not in the hospital, and only a limited portion of these home cases can have their needs met by the work of the visiting graduate nurse, since these cases call for continuous and not intermittent service in the home. This leaves the great bulk of the cases requiring continuous care in the home to be cared for either by private graduate nurses at from 21 to 25 dollars a week, which is obviously impossible for everybody under present conditions, or by such other care as the families, generally unaided by any existing organizations, can get hold of.

Most of this, of course, has nothing in it of original discovery, it is only too well known that outside of visiting nurse work, modern advances have done nothing, or less than nothing, except in a medical and surgical way, for the average family in case of sickness in the home. This is the general condition and this was also our local problem to which I will return in describing our attempt at a solution.

We had the following resources:

A hospital that could take care of some of our cases of illness, visiting nurses that would do for a certain additional number of home cases, and graduate nurses who were available for some of the remaining home cases. There were, however, a very large number of home cases that could not afford a graduate nurse, and an additional number for whose needs the graduate nurse did not answer whether there was money to pay her or not.

To meet this situation we decided to start an office that would be open at all hours to the call of any family in difficulty through sickness, whose needs could not be met from the sources already mentioned.

We resolved to find out exactly what the needs of those unsupplied families were and to search for the workers who were best fitted to meet those needs with econ-

omy and efficiency.

The office, you will understand, was not designed to render financial aid, but was simply a neighborhood organization intended to meet, on a business plan, the physical problems and difficulties coming upon a family on account of sickness. Its original organization was of the simplest, consisting of a secretary with a telephone in her home, backed by a committee of women representative of the homes to be served.

Its task was not to provide any prescription that the families in trouble ought to want, but simply to find what the family that had sickness did want and what it was up against when its needs were not met by the hospital, by the visiting nurse or by

graduate nursing.

This brings us down to the question of what are the needs of the average family in sickness, and marks the point where scientific nursing in this country and in some parts of Europe went off the track when the woman wishing to learn the business of a nurse was taken out of the home for the necessary scientific training in the This training was essential but the touch with the home and its needs, which was equally essential, was unfortunately lost. This was the fault of no one in particular but was due to the circumstances. The new kind of nurse trained in the hospital and understanding the scientific principles of nursing came into sudden competition with the old-fashioned nurse who was the product of the home and understood its needs. They did not appreciate each other's virtues and failed to co-operate.

In looking into the actual needs caused by sickness in the home, we find that we have to deal not only with the patient, but with the family including the patient, and with the household organization that keeps

the family going.

As our hospitals themselves by their social service bureaus have now found out, the patient is not an isolated unit, nor a one dimension proposition. The housewife and mother confined to her bed by illness



or childbirth cannot possibly be treated successfully unless she knows that her home is being kept in order and that her children are properly fed and cared for.

It is evident therefore that the kinds of labor involved in caring for sickness in the home must vary from the most skilled and scientific nursing to the work of children's caretakers, cooks and chore boys. some cases it happens that a good, efficient houseworker or children's nurse is a more important agent for cure than the most skilled hospital graduate. It is evident that failure to accord equal importance to one element with the other, is like maintaining that one of your feet is less important than the other for standing on, and then trying to dispense with it.

Upon the recognition in practice as well as theory of this fact depends the proper solution of the problem of handling sick-

ness in the home.

But to return to our work; our office at first confined itself to this household prob-The town was searched for the various kinds of labor that could watch by the sick, tend children and do chores. During the first year about a thousand days' useful work was done at a net cost of two or three hundred dollars, the cases practically carrying their own costs.

Soon, however, we found that the problem was not so simple and that the most important technical questions of nursing were inextricably interwoven with the most ordinary but none the less most vital house-

hold problems.

We therefore sought and obtained the services of Miss Charlotte Macleod, who after building up an important training school for nurses in Massachusetts, had taken charge, under Lady Aberdeen, in starting the Victorian order of Nurses in Canada.

She combined nursing knowledge and experience of a high order with a still higher devotion to the general service of human-

ity.

The result of the working together of these two elements,-the women's committee understanding the home problem, and the nurse understanding not only this but the nursing problem,—was to evolve what we have not often had before in this country-an office with a working force using the co-ordination of labor of all kinds in rendering service to the homes in sickness, and taking the needs of the home, including the patient, as a starting point.

We found that where continuous care was needed, that continuous care was often not necessarily the continuous care of a graduate nurse. While in some cases, or during certain acute periods of sickness, the continuous service of the graduate was needed, much of the continuous service needed was household service, with occasional help for the patient, such as could best be rendered by women trained to supplement the graduate nurse and perform that service.

We thus gradually evolved an organized working force, in a development that is as yet far from complete. Our force is as follows:-

Under the general superintendent is a visiting nurse doing the usual visiting nurse work, and a supervising nurse who has under her a squad of household nurses or attendants. In addition to this, there is a directory and employment agency of graduate nurses at one end of the list, and at the other end a miscellaneous list of all the people in the town who can go out to

help by the hour, day, or week. What we are undertaking to do is to get all of these forces to work together, supplementing each other in co-ordination, with the object of producing the most effective service at the lowest practicable cost. This is nothing but the old principle of co-ordination of labor, used in every workshop since the most ancient days, here applied to the care of the sick. Why it has not been commonly done before with nursing is explained as I have stated. Educated trained nursing is such a new thing that it has not yet got adjusted to ordinary working conditions. We have had competition between various kinds of nursing forces instead of co-ordination, and we need to have applied to this problem the same plain business sense that has built up our ordinary industries, by using various kinds of labor in co-ordination, and getting the more technically skilled and trained workers to instruct and help out the others.

There are, of course, an infinite number of examples to be shown of the working out of this method, but one of the most simple and common is the confinement case, handled as follows:

When the labor begins, the supervising nurse is summoned with the doctor, and we thus make sure of her special skill during the crisis. As this nurse has cases running into the hundreds in the course of the year, she has the best chance of being well up in her business and it is often an invaluable aid to the doctor, even if he is an old hand at the business, to have such a woman at his elbow in any of the vital emergencies that often arise during childbirth.

After the birth when the nurse goes away, having made mother and child as comfortable as possible, she leaves a perfectly fresh assistant, whose duty it is not only to look after mother and child, but to see that the household goes on as usual,—breakfast got, children started for school, etc. The case is then carried through by the continued work of the assistant in the house, directed by means of regular visits by the supervising nurse, who continues to do any services that may require her special skill and knowledge.

Here we have co-ordination of labor, and a confinement case is put through at a service cost of perhaps \$25, to \$35, including the care of home as well as patient. The student of efficiency and economy will have to remember that, if the mother had gone to a maternity hospital, the home would have had to be carried on just the same.

There are plenty of similar illustrations but I can here give you only a very brief and incomplete description of the development of this work and of its nature, and of how an office can be evolved that is prepared to ask the vital question, "What kind of help do you need," and is then equipped to supply that need, at a reasonable cost.

There are various other aspects of this kind of work that will occur to one and another of you such as the following:

Such an office open night and day to the call of a neighbor's distress can do much not only for the family in trouble, but for

general community efficiency.

The foreman of a workshop finds that his best workman is missing some morning, and things at the shop go wrong. This is repeated, and the man is in danger of losing his job. When they come to find out, there is sickness at home and he cannot get anybody to help; he really cannot get away. But with the nursing service office to call up, matters are different. The workman can go to his job, knowing that there is somebody that he can rely on to help him out at home. With efficiency here, there is saving not only for the family, but for the whole community. It is not the highest efficiency to organize your shops for work without organizing for the home so that the workmen can get to the shops.

The efficiency of the home, or rather the

potential efficiency of the home, in sickness, may be shown by a very different case in another town.

A small hospital had been established by us where good service was being given, costing, including capital charge, three or more dollars a day, per patient. After it had been going for some time, I heard of the following case in a home only a short distance away:

A man was mortally ill with heart complaint; his wife did not want to send him from home to die, though they were ready to take him into the hospital, nor did he want to die out of his home. Any of you would feel the same way. You know a home, even a small one, is a pretty good place to die in, when your time comes. So week after week that woman had held him in her arms through the nights while he fought for breath, and had carried on the home through the day practically unaided, until the end came.

What was the service which that little home needed? Was it the three or more dollars a day hospital service that we had offered, or was it just that plain service in the home that, without straining this wife to the breaking point, would have enabled her to have her husband die in his home and in her arms?

There is a side to this case that appeals to the heart, but please do not let this keep you from looking at the side that appeals to the head. There is no reason why the hard headed business common sense of our business people should carefully avoid spending a little of itself on efficiency in care for the sick, merely because such work has the misfortune to be called philanthro-What we were attempting to do for this case lacked the element of common business efficiency, and therefore failed. We were offering something for three dollars that these people did not want, instead of something for one dollar that they wanted, and wanted badly, namely: plain household service to relieve the wife and enable her to give her strength and time to her husband in his last hours. What would the head of a business house say to a similar procedure by one of his salesmen?

Now I do not wish to be misunderstood in this matter. There are plenty of uses for the hospital; there are plenty of cases that must go there and that are better there; no community can do without good hospitals. You will have need for every dollar that you can raise for hospitals properly situated. What I wish to bring before you is this: You cannot get the full efficiency out of your hospitals unless by organizing you get the full efficiency out of your homes. It is a plain case for an all around study of economy and efficiency.

Unless you are well organized for reaching the home when sickness first comes, the right cases will not get to the hospital in time; the right cases for the home cannot be properly handled there, but will have to crowd the hospital, and remain there longer than would otherwise be necessary. Moreover, when the hospital has served its purpose and the patient is ready to return home and make room for the next one, the work of the hospital will be lost unless the home conditions can be made such that the convalescence can end in health and not in helplessness.

I would advise anyone who has not a hospital already going in his town, to organize the home service first. Then we can know what the whole problem of sickness is. We can tell how much of a hospital is needed, and we will be equipped to use our hospital to the best advantage when it comes.

Perhaps one of the most definite ways of conveying to you the kind of work done by this office, is to give a list of the occupations of the breadwinners in the families served, and to have you understand that all but a very small percentage of the labor costs of this work was paid for by the people themselves, and that a small percentage was paid for by agencies outside of the nursing office.

The breadwinners' occupations were, farmer, gardener, bank clerk, machinist, operative in organ shops, overall factory operative, milliner, fireman, painter, cutter, sheriff, tailoress, domestic, chair factory operative, janitor, lawyer, real estate agent, salesman, baseball player, teacher, veterinary, boarding house keeper, carpenter, junk dealer, assistant editor, teamster, printer, general secretary, laborer, brakeman, Standard Oil Company employee, mechanic, electrician, and nurse. Of all these heads the farmers were the most numerous.

I have given you here chiefly the point of view on this subject of the community and the householder.

There is in addition, however, the point of view of those who serve you in sickness,—the physician and graduate nurse, and also the so-called practical nurse.

There is no more trying dilemma for the doctor than to have to choose between recommending what is not adequate for the patient and what is too expensive for the home to afford. A cheaper and more efficient nursing service offers some relief from this.

(To be concluded in July GAZETTE.)

NON-MEDICAL ANESTHETISTS.*

By LAWRENCE IRWELL, M. A., B. C. L., Buffalo, N. Y.

THE Congress of Surgeons which recently met in Chicago, urged the enactment of State laws which will require physicians to have five years' experience before being allowed to practice surgery, etc., etc., but not one word was said concerning the qualifications which an anesthetist ought to The explanation may perhaps be found in the fact that very many surgeons know little about anesthetics and never study the subject, yet in some instances in which the patient is a bad surgical risk the administration of the anesthetic needs quite as much care as the work of the surgeon. A certain Philadelphia surgeon uses a nurse as anesthetist, and professes to have great confidence in her ability. Nevertheless.

*Reprinted from the New York State Journal of Medicine.

when his patient is in poor condition for an operation, he does not allow this nurse to give the anesthetic, but substitutes a physician. Why does he do this? Either because he is afraid of legal proceedings in case of the patient's death on the table, or because, despite his professions he has little confidence in the nurse's knowledge of anesthesia. There is no doubt that some nonmedical persons can be taught to give general anesthetics with safety, and there is also no doubt that some men could be taught to perform surgical operations without taking a complete medical course. But both the art of surgery and the art of administering anesthetics are specialties in medicine, and patients are not properly protected when amateurs are allowed to pose as specialists on surgery or on anesthetics.

Deaths from anesthesia are more common than any statistics show. In the first place, unless the patient dies in the operating room, no death certificate ever gives anesthesia as the primary cause of death. Secondly, shock as a primary cause of death sometimes means an incompetent or inexperienced anesthetist. The idea that a nurse can become as safe an anesthetist as a medical expert is not correct, notwithstanding the boasts of certain persons residing in Rochester, Minnesota. She can become as good an anesthetist as it is possible for a person without medical education to become, and that is all. Very many nurseanesthetists are deplorably ignorant of physiology, and few of them know what acapnia means. Yet death from acapnia is far from impossible. Any one who has ever seen any anesthetic administered by a medical specialist and the same anesthetic given later by an interne, or a "specially trained nurse," knows what the difference is to the patient—not only the chance of death on the table, but the extent of the post-anesthetic suffering. Concerning the latter point, an investigation at a St. Louis hospital, where two thousand patients were anesthetized by a medical specialist and the same number by internes, showed statistically that post-anesthetic nausea and vomiting are trivial when a medical specialist has administered the anesthetic compared with the extent of both forms of suffering after an interne has dropped ether onto the mask. The managers of this hospital do not employ any nurses to do physicians' work, and the administration of anesthetics is, both legally and medically, a part of the practice of medicine; it is not a part of the practice of nursing.

The need of legislation in this State (New York), specifically providing that the administration of any general anesthetic, even in the presence of a physician, constitutes the practice of medicine is, in my opinion, proved by two facts: First, deaths from anesthesia occasionally occur in cities where the services of competent anesthetists are always available. Inquiry sometimes shows that the case was one of childbirth in which the nurse was permitted to give chloroform as a complete anesthetic, not a few drops as an analgesic. In other cases investigation shows that a surgeon employed a "specially trained nurse" as anesthetist, sometimes for a "private" patient, without having even mentioned to that patient that by paying a small additional sum, seldom over \$25 (and

outside New York City considerably less), he could be anesthetized by a medical specialist. Secondly, nitrous-oxide-oxygen is now being used by a few surgeons as a routine anesthetic. For short dental operations it is comparatively safe, but for major surgery it has proved much more dangerous than ether, even in the hands of some medical specialists of great experience. Gatch, for example, has had three deaths out of 2,500 administrations. How many Dr. Teter, the Cleveland dentist, has had, I do not know, and he may not have had any for some years. I should, however, like to see his statistics with all dental operations excluded. He is the "medical" anesthetist at some Cleveland hospitals. special need for legislation is this: At a certain hospital in Cleveland, Ohio, nurses are being "trained" to become "specialists" in the administration of nitrous-oxide-oxy-The so-called "training" occupies from four to six months, at the end of which period these nurses are allowed to pose as experts in the art of administering nitrous-oxide-oxygen for surgeons, and some of them are "practicing" outside the State of Ohio. As a well-educated physician cannot become an expert anesthetist in six months, to pretend that a nurse, with her meager training in physiology and very little indeed in pathology, can become a safe administrator of N_2 O + O in that short time is nonsense, of course. Further, more than two years ago the Attorney-General of Ohio gave an opinion that the administration of general anesthetics by non-medical persons in the presence of a registered physician is unlawful in Ohio. The hospital in question, however, still continues to use nurses as anesthetists and to "train" other nurses to become "specialists in nitrousoxide-oxygen anesthesia." Such "specialists" are a danger to the community; there is no popular demand for them in New York State, and the legislature ought to protect the public from them by passing a very brief addition to the Public Health Law providing that the administration of any general anesthetic constitutes practicing medicine. The midwife practices medicine legally, but she is, in my opinion, a detriment to the public. The nurse anesthetist, upon the other hand, is doing what the legislature never intended to permit her to do. Even with the existing law she could probably be indicted, but conviction is far

Legislation prohibiting physicians from doing surgical work before becoming surgeons may be desirable if constitutional, but it is not nearly as necessary at present as is legislation that will effectually prevent nurses from practicing a specialty in medicine without a medical education, but with the connivance and assistance—and sometimes for the special benefit—of surgeons, some of whom know very little of the real dangers of any general anesthetic.

Never in the history of the United States has there been a time when the public distrusted the medical profession as much as it does to-day. Never in the history of the country was there a time when quacks were so numerous and so successful in a financial

sense. Educated men and women are beginning to learn that the administration of a general anesthetic is a very serious matter, and before many years have passed most people will know something of the danger of anesthesia and its horrible aftereffects when given by amateurs to sensitive patients. When that knowledge has become general, the surgeon who uses a nurse to anesthetize his "private" patients who are well able to pay for a medical specialist, can say good-by to his practice, assuming, of course, that the law has not previously interfered with nurses who practice medicine at the behest of and for the benefit of surgeons.

The reader will kindly note that I am not

a physician.

HOSPITAL CARS.

THE Swiss Federal Railways have added to their equipment several hospital cars, which are intended for conveyance of sick and invalid travellers. The cars are placed at the service of private parties, and being intended especially for long journeys, they are fitted out with all the technical equipment to adapt them for travel over the various European railway systems. Not only is the car fitted to travel on all standard-gauge railway lines of the Continent, but it is designed also for transfer on the Scandinavian and Sicilian ferryboats.

The car is heated by steam. A hot air installation serves to heat up the car when installed or before starting or when travelling on lines not equipped with steam heating. All the compartments of the car are electrically lighted. The dynamo, driven through belt transmission from one of the car axles, also supplies electrical energy for various apparatus with which the car is

equipped.

The sick room, which is located on the middle of the carriage, and the adjoining lavatory, are fitted up aseptically in the same manner as up-to-date hospital rooms, all the walls, ceiling and floors, as well as the furniture, being readily washed and disinfected, while all the angles of the walls and ceiling are rounded off and any joints covered over with smooth nickel-plated metal. The floors are lined with inlaid linoleum.

The sick room contains a good bed with iron frame and steel mattress and a re-

movable lifting device. The horsehair mattresses are made in three parts to facilitate disinfection; a chest of drawers fitted into the wall contains several changes of bed-The sick room further contains a bed-table with adjustable plate and iron cabinet with marble plate and enamelled case, an upholstered easy-chair with iron frame and washable leather lining, and a divan also coated with washable leather, the hinging back of which can be used as emergency bed, after covering it with horse-hair mattresses. In addition to a drop-light, there is provided a portable electrical wall and table lamp, whose light can be cut off by means of an inclosing shade. An electrical heating-pan serves to heat the bed. There is, of course, the usual electrical bell call for nurse, and a wall fan for ventilation. The sick room is accessible from outside through broad folding doors in the side-walls, through which the invalid can be brought in on a stretcher or Sedan chair.

Adjoining the sick room are the quarters for the attending physician or nurse. The furnishings here include sleeping accommodation and an upholstered seat covered with washable leather; further a folding table and a metal and plate glass cabinet for medical necessaries, surgical instru-

ments, dressings, &c.

A first-class compartment for the patient's relatives or friends is attached, this also being equipped as a "sleeper."

The kitchen is equipped with an ice box for food and drink and to store ice for medical use; there is a marble topped table, also a fire-clay sink with self-locking water faucet. Under the kitchen table there is a small chest of drawers for polishing utensils, and on top of the ice box a

crockery cabinet, in which the kitchen linen is also kept. The kitchen is operated electrically. Over the kitchen, as well as the lavatory, are arranged water-tanks in tinned copper-plate.—British Journal of Nursing.

INSTITUTIONAL LAUNDRIES.

In a recent number of the Zeitschrift fur Krankenanstalten, Herr Klaffke, the superintendent of the Elberfeld Municipal Hospital, writes at some length on the subject of the institutional laundry, approaching the matter from a purely practical point of view. His article is almost exhaustive and teems with informative hints and suggestions. First he deals with the general question of loss and deterioration. We all know how much in private life we suffer from the washerwoman—now more often the laundry machine. The tearing up of cotton and linen goods, the unraveling of mixed material and the general damaging of stiff goods are everyday commonplace grievances which are, however, far more serious in institutional than in private life. That they occur is due commonly to carelessness and want of adequate supervision. In an institutional laundry, properly equipped and staffed, such carelessness is inexcusable. For, as Herr Klaffke shows, nearly every variety of destruction can be prevented by proper care and management. One of the most common causes of indifferent laundry work in English institutions is the use of hard or insufficiently soft water for washing purposes; another equally material cause is false economy in the use of By sparing the soap the material washed almost invariably runs the risk of being spoiled in a greater or lesser degree. We are too prone to look upon soap merely as a chemical means of removing dirt, whereas in these days, when comparatively heavy-working rinsing and mangling machinery are used, a good soap is invaluable as a mechanical lubricant in preventing damage to the linen by ameliorating the action of the rollers. This lubricating action can, however, only be fully secured when soft water is employed; with hard waters a large amount of soap is wasted. Hospital workers in general have no conception of what this waste really means, nor is it easy to express it in figures. But, as a general rule, the experiments at the large Rudolf Virchow Hospital have shown that one part of lime in 100,000 parts of water means six-

teen times the amount of soap, so far as laundry purposes are concerned, that is used up in soft water containing no lime. A certain percentage of this loss can be spared by a liberal use of washing soda, but by far the best means of securing economy of soap is by previously softening the water, and undoubtedly the most practical method of softening is the so-called Permutite process. A very interesting point to which Herr Klaffke draws attention is the damaging action upon cotton and linen goods of electric bleaching. Recent experiments have shown conclusively that these methods of whitening tend to deteriorate the quality of the articles subjected to them by as much as fifty per cent. For this reason, when the method is used, care must be taken to employ very weak solutions, to turn the articles frequently so as to insure an even action, and to exercise discrimination in selecting articles for bleaching by this meth-The damage done by the use of strong chemical adjuvants, now so frequently used where quick washing is required, is also very great. Soaps containing a relatively low percentage of fat and alkaline soap powders appear to be responsible for most of the damage done in institutional laun-Where chemical disinfectants are used the damage is much greater, although not in general so apparent at first. Rapid steam boiling, for example, tends to de-teriorate the fiber of cotton articles to a small extent; if to the wash water a percentage of an alkaline soap powder is added, this deteriorating effect is markedly increased, whereas if a superfatted soap is used the destructive action is far less.

We do not know of any similar series of experiments to these in English institutions. It would be instructive and interesting, therefore, to have the views of hospital workers who have experience of institutional laundry work on the subject for purposes of comparison. More especially is it desirable to find out what are the most economical and efficient methods of softening hard water employed in our large institutions.—

The Hospital.

Questions and Answers.

The following answers are not "official." They are prepared for the editor.

VERMONT BOARD OF REGISTRATION OF NURSES.

MONTPELIER, MAY 8, 1913.

OBSTETRICS.

Do not write questions—number them and letter sub-divisions.

Only answer ten questions.

1. What do you understand by the term pregnancy?

Ans. The condition of being with child; gestation.

2. What are the physical signs?

Ans. Changes in shape, size and feeling of the uterus; ballottement; fetal heart sounds; fetal movements; recognition of fetal parts.

3. Define the following: a. Abortion. b. Premature labor. c. Extra uterine

pregnancy. d. Placenta previa.

Ans. (a) Expulsion of fetus before it is viable. (b) Labor before the proper time but after fetus is viable. (c) Pregnancy in which the fetus resides in some organ outside the uterus; ectopic gestation. (d) Placenta which is implanted over the entrance to the cervical canal.

4. a. How many stages of labor? b. Describe each.

Ans. (a) Three. (b) The first stage is the period of dilation, beginning with the first labor pains and ending with complete dilation of the os. At this period the bag of waters usually ruptures. The second stage is the period of expulsion, extending from the dilation of the cervix to the birth of the child. The third stage is the placental stage, beginning with the birth of the child and ending with the expulsion of the placenta and the contraction of the uterus.

5. How would you prepare a bed for

labor in a private house?

Ans. If possible, have single bed, of medium height and accessible on both sides; the mattress should be firm and flat, yielding as little as possible under the weight of patient. The mattress is protected by a rubber sheet, oilcloth or thick pad of newspapers. Upon this lies a bed sheet. Over this is the draw-sheet or large folded sheet held smoothly in place by safety pins. Above this are placed a second rubber sheet, or other protective sheet,

and a draw-sheet, both of which are to be removed after the confinement in order to leave patient in a dry, clean bed. A few dry pads of any absorbent material, about two feet square, should be provided and sterilized beforehand, in order that the patient may lie upon them and protect the bed from discharges.

6. What care would you give the breasts

before and after delivery?

Ans. During pregnancy the breasts should be kept scrupulously clean, and free from pressure; the nipples should be soft; if crusted they should be bathed with soap and warm water and anointed with cocoabutter or albolene; if retracted, the nipples should be drawn out with the thumb and finger several times a day. The breasts should always be protected from injury, and if large and heavy they should be supported from beneath to relieve them from dragging and consequent congestion. During the puerperium the breasts must be washed twice daily; the nipples are swabbed with boracic lotion or sterile water before and after each feed. If the nipple is tender it is anointed with sterile albolene or cocoa-butter. If breasts become heavy they may require support by a properly adjusted binder. The nipples and breasts must be handled as little as possible to avoid infection, and if touched by the hand at all, the hands should first be well If nipples become fissured or sterilized. breasts engorged, further prophylactic precautions will be necessary.

7. a. What is the lochia? b. What

are the signs of hemorrhage?

Ans. (a) The vaginal discharge following childbirth. (b) Paleness of face and lips, cold sweat on forehead, rapid respiration, yawning, rapid pulse; dizziness, faintness, ringing in the ears, followed by restlessness, muscular cramps, unconsciousness and death.

8. What are the symptoms of eclampsia?

Ans. Dull frontal headache, disturbances of vision, epigastric pain, somnolence or insomnia, excitement, vertigo, vomiting,

despondency, diminution of urine, ringing in the ears. Sometimes there is edema of the feet and a tendency to coma.

9. a. What care should you give the eyes of the new born? b. The mouth?

Ans. (a) Separate the lids gently and drop into each eye a solution of silver nitrate (1%), or one of the other silver salts used in such cases. (b) Mucus should be gently wiped from the mouth with the little finger covered with a soft cloth. If mouth fills with mucus so as to interfere with free respiration the infant may be held head downward for a short time, and mouth wiped again. He should then be given a drink of water.

10. If alone what would you do for secondary hemorrhage from the cord?

Ans. Send for the doctor, and while waiting tie the cord again with a piece of tape, or, with sterile fingers make firm compression over the bleeding point until the doctor arrives.

11. a. What is the best food for babies?
b. Give temperature of water for first bath.

Ans. (a) The milk of a healthy mother, preferably the mother of the baby. (b) From 100 degrees to 105 degrees Fahr.

12. What is the danger of using a glass

catheter during labor?

Ans. Danger of breaking the catheter in the urethra during a pain.

SURGICAL NURSING AND BACTERIOLOGY.

Answer 10 questions only.

1. Define strabismus, myopia, hypermetropia and ophthalmia neonatorum.

Ans. Lateral deviation of one or both of the eyes. Near-sightedness. Far-sightedness. Purulent ophthalmia of the new-born.

2. What is the safest method of removing a foreign body from the ear?

Ans. Syringe with warm water, inclining the head to the side affected. If body is not dislodged easily, call a doctor.

3. Define fracture, ecchymosis, gan-

grene, abscess.

Ans. Breaking of a bone. Extravasation of blood and disturbance due to it. Mortification or massive death of a part. "A localized collection of pus in a cavity formed by disintegration of tissue."

4. Define antiseptics, germicides, deodorants. Name one of each, with indica-

tions for its use.

Ans. A substance that destroys poisonous germs and prevents decay, as phenol, in aborting boils. An agent that destroys microbes, as steam, in sterilizing dressings. An agent that destroys odors, as formalin, in offensive cancer cases.

5. Classify bacteria according to shape. What conditions are necessary to their

growth?

Ans. Bacillus, rod-shape. Coccus spheroidal. Spirillum, spiral-shape. Warmth, moisture, not too much light, and a "medium" containing sufficient food. Some require oxygen and some do not.

6. Define spore, parasite, saprophyte. Name two spore bearing bacteria.

Ans. The reproductive cell of one of the lowest plants or animals. A plant or animal living on a living organism. A vegetable organism that grows upon decaying matter. Bacillus Subtilis, Anthrax bacillus.

7. Describe in detail the various steps

m catheterizing a female patient.

Ans. Prepare and sterilize the following: 2 or 3 towels; 6 or 8 gauze sponges or sponges of absorbent cotton; 2 catheters, in boric acid solution; 1 small receptacle for urine; 1 larger receptacle for urine; a hot solution of boric acid; a hot bichlorid solution. (1:2000). Patient lies in dorsal position with knees flexed, and clothing rolled above the waist. One sterile towel is placed on bed below the vulva, another is laid over the pubes. The small receptacle for urine is placed between patient's thighs; when filled it is emptied into larger recep-The nurse sterilizes her hands. She stands on the right side of patient. With her left hand she separates the labia widely and with the right hand thoroughly washes the parts around the urethra, using the sponges and the boric acid solution. She again washes her hands. Then, using the left hand as before, she takes the catheter in the right hand and inserts point into urethra, pushing gently until urine flows. As the flow of urine slackens, she withdraws catheter a very slight distance until the flow begins. In removing the catheter the free end must be tightly stopped in order to retain the urine in the catheter. The vulva is then sponged and dried with sterile towel, and patient made comfortable in bed.

8. Name and describe uses of five positions of patient for operation or treatment.

Ans. Horizontal, for digital vaginal examination. Lithotomy, for access to bladder and rectum. Knee-chest, to correct backward displacement of pelvic organs. Sims' position, for exposing cervix and dome of vagina. Trendelenburg, in pelvic operations, to remove the abdominal viscera from field of operation.

What is cystitis?

Ans. Inflammation of the bladder.

10. What becomes of a silk ligature left buried in the tissues?

Ans. It remains unabsorbed, and surrounded by a cicatrix like deposit of new tissue.

11. Define hemorrhage, shock, coma, as-

phyxia, syncope.

Ans. Escape of blood from the vessels. "Sudden vital depression due to injury or emotion." Profound stupor after illness or injury. Suspended animation as from suf-Swooning or fainting. focation.

12. Name four purposes for which

enemata are administered.

Ans. Purgation, Stimulation, Alimentation, Application of heat.

University of the State of New York 21st Nurses Examination ANATOMY AND PHYSIOLOGY.

Tuesday, January 27, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will deciduous teeth begin?

1. What constitutes the pulse?

2. Locate and describe the tonsils.

3. At what age does the cutting of the deciduous teeth begins?

4. Name the three membranes that pro-

tect and nourish the spinal cord.

5. What is the character of the membrane that lines passages and cavities communicating with the exterior?

6. What is the character of the mem-

brane that lines closed cavities?

7. Describe a cell.

8. Name three different channels of elim-

ination by the body.

9. What position do the white blood corpuscles occupy during normal circulation?

10. Which is the pyloric and which the

cardiac opening of the stomach?

11. What are glands?

12. Define (a) pneumogastric, (b) hypogastric, (c) epigastric.

13. Locate and describe the patella.

14. Locate the hard and the soft palate.

15. What is protoplasm?

Have your answers to these questions ready for comparison with the answers to be given in a later number of the GAZETTR.

Practical Nursing and Dietetics. Name three qualifications necessary for a nurse to have. (2) Name three ways of introducing medicines into the system. (3) How would you collect a twenty-four hour specimen of urine? (4) Define the following:—(a) subsultus, (b) tympanitic, (c)dyspnoea, (d) cyanotic. (5) How could you improvise a Kelly pad? (6) (a) What position would a patient naturally take when suffering from peritonitis? (b) Why? (7) State in detail your method of making and applying a mustard paste. (8) In what way does the serving of food affect digestion? (9) How would you make kumyss? (10) Explain the advantage of taking a glass of milk slowly. (11) Why is bread more easily digested when toasted? (12) How is the fuel value of foods expressed?

KILL THE GERMS AND PREVENT THE DIS-BASE.—Communicable diseases come only from the germs of those diseases.

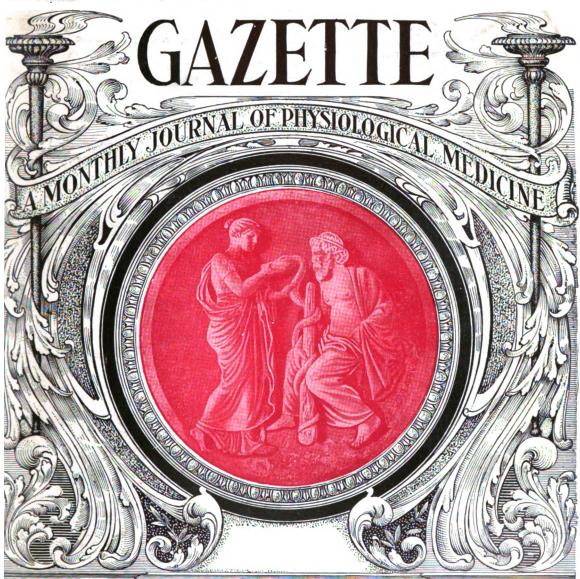
Kill or render harmless the germs and you will prevent the spread.—Bulletin Buffalo Health Dept.

TREAT CHILDREN KINDLY.—The barbarous custom of 'hardening' a child by keeping it without shoes or stockings at all seasons is responsible for many of these attacks (of bronchitis).—Henry Enos Tulby, M. D.—Pediatrics.



THE

DIETETICANDHYGIENIC



PUBLICATION OFFICES

87 Nassau St.

New York

\$1.00 Per Annum. 15c. Per Copy.

Entered as Second-Class Matter at the New York Post Office.

The best antiseptic for purposes of personal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teeth.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts

water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY

LOCUST AND TWENTY-FIRST STREETS :: ST. LOUIS, MO.

VAGINAL ANTISEPSIS

IS COMPLETELY SECURED THROUGH THE EMPLOYMENT OF

AseptikonS

(FORMERLY KNOWN AS CHINOSOL COMP. VAGINAL SUPPOSITORIES)

These suppositories are indicated in cervicitis, leucorrhea, specific and nonspecific vulvo-vaginitis and in all cases where complete vaginal antisepsis is desired.

NON TOXIC, NON IRRITATING, NO DAMAGE TO MEMBRANES.
YET A MORE POWERFUL ANTISEPTIC THAN BICHLORIDE

Chinosol-Tablets and Powder Full Literature on Request

CHINOSOL Co.

PARMELE PHARMACAL CO-SELLING AGT. 54 SOUTH ST., N. Y.

Digitized by Google

THE

DETETICANDHYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

Vol. XXX.

3

JULY, 1914.

No. VII

EDITORIALS.

AN ANTI-VIVISECTION PLAY, IN THREE ACTS.

THE scene of the first act is laid in Carnegie Lyceum, in New York City, where there was recently an enthusiastic gathering. Dinners, of which roasted or broiled meats (animals, by the way, almost invariably meet tragic deaths) were a part, were being comfortably digested; so that everybody was in a position to take an amiable interest in the proceedings. The great majority in this audience were women, who wore the plumes of slaughtered birds in their hats; and (it being evening) pet dogs, whose tails had been docked, and whose ears had been clipped, were reposing undisturbed at The lady president of the Antivivisection Society (in alliance with the International Anti-vaccination Union) spoke with the precision of statement so characteristic of the feminine mind. The great difficulty in getting started in this country, she declared, is because, "while no doubt 50 per cent. of the medical profession are to-day at heart opposed to vivisection, its leaders in New York, confident in their eminence and power to punish, have sent out a practical prohibition to all physicians that they should not approve or sustain in any manner any movement toward a restriction of vivisection." Several public-spirited gentlemen were on the platform. One among these, in terms, conspicuous for man-like temperance of expression, stated that those medical experimenters who vivisected animals were "virtuosos of agony, in whom curiosity, vanity or scientific zeal has supplanted

humanity, and to whom harmonies or discords of agony or long-drawn cadences of torture struck from quivering nerves are music." One clergyman contended that the practices condemned are continued for "the purposes of commercialism, to obtain antitoxins, which have not yet proved their efficacy, and in some instances have been known to have increased disease instead of decreasing it." Another maintained that vivisection is "contrary primarily to the law of God"; this clergyman would no doubt a generation ago have denounced the administration of chloroform to women in labor, on the basis of some scriptural ex-The Rockefeller Institute was stigmatized and "resoluted" especially against as being "the principal theater of vivisection operations in this part of the world to-day." A bill was read, which had been introduced in the legislature at Albany; and the assemblyman who was responsible for it naively observed that in passing it the state would incur no expense, for the Anti-vivisection Society and the Humane Society had offered to provide the salaries of the inspectors proposed in the

The second act of this play takes place in the city of New Brunswick, N. J., where the two villains of the cast, by name Dr. H. H. Janeway and Dr. E. I. Cronk, have been laboring under the obsession that without animal experimentation medicine would be "but a savage art— not even the shadow of the present science of cure and preven-

Being desirous of perfecting an operative procedure for gastric cancer and tuberculosis, they have done tentative operations on animals; and have also, in a spirit equally unscientific and calloused, removed a lobe of one lung from a dog named Pete. The sufferings which a veracious lady of that city had alleged this dog was enduring have divided that generally peaceful and sane community into two camps. A somewhat Gilbertian warfare has resulted; most of the contestants, especially the feminine participants, "did not know, what it was all about anyway." A superb strategic move was the arrest of Drs. Janeway and Cronk on charges of cruel usage of the dog Pete. made by the aforesaid tender-hearted lady; the miscreants happily regained freedom when bail of \$300 for each was paid. Pete, because of whose agonies the arrests were made, was sought for in his usual comfortable bunk in Dr. Janeway's barn. But the martyr, who "for the sake of science, had given most of himself away," was absent; he (or what remained of him) was found near by, engaged, with all his old-time zeal, in his favorite occupation of chasing the New Brunswick cat; which he, in his turn, was trying to vivisect.

The third act takes place on a bleak bank of the East River, with the reprehended Rockefeller Institute providing the back scene. Several hours before dawn a vener-

able gentleman rang the bell at the entrance door of the building. But there was no one to respond to his ringing. He therefore sat down before the doorstep, or waited about it in most inclement weather, until daylight. Being then admitted, he made known his errand. He is connected with Bera College, where either a real or suspected case of epidemic cerebrospinal meningitis has developed; and he was most anxious to secure some of the serum which Dr. Flexner and his associates have, largely through animal experimentation, evolved both for curative and prophylactic purposes, against that dreadful disease. At first it was thought to refuse his request, for the reason that the work on this serum is still in the experimental stage. Finally, however, on his assurance that it would be given only by skilled physicians, who would be responsible for its proper use, several vials of this serum were entrusted to him; and they were at once rushed off to Kentucky, in the hope that they would reach their destination within twenty-four hours. All men and women of really humanitarian instincts may reasonably entertain the belief that in this circumstance valuable human lives have thus been saved, and that much of the ghastliest sufferings in all medical experience has thus been averted.

The reader must decide for himself if this play has been a farce, a comedy, a drama, or a tragedy.

FINGER PRINT IDENTIFICATION.

MR. Wm. A. Pinkerton has seen the finger print signature used in the interior of China, by merchants and others having occasion to sign a document. In that "benighted" region one keeps a cake of ink for that purpose ever at hand—or at one's finger tips. The great detective considers this method of personal identification to have obtained many centuries, perhaps thousands of years, in China; and it would seem that for all its use there have never been in the Middle Kingdom two identical

thumb or finger prints belonging to different individuals.

From China the finger print system spread into Northern India where it was adopted early in the British occupation by the military authorities for the identification of native troops. Now all the white troops in India are registered by thumb print as a means of identifying deserters. Next English officers returning from Indian service and becoming police functionaries at home made it the present method of identifying criminals. To-day, in Great Britain every man and woman who has ever been

in custody has the finger prints registered for reference at any time by the police. And it is being sought to establish this system in American police affairs. Thus are not only the criminal identified; but also are the guiltless protected. Oftentimes (how often one hardly realizes who has not delved into the matter) innocent people are wrongly accused by reason of misleading photographs; but when thumb prints accompany the pictures the suspected person can easily prove his innocence.

But to Francis Galton must be accredited the formulation of finger print evidence into a workable system. He published his "Finger Prints" in 1892 and soon after his "Index of Finger Prints." Galton found that the chance of the finger prints of two individuals being identical is less than one in sixty-four billions. If therefore two such prints are found on comparison to be identical nothing in human logic can be surer than that they are the prints of the same person; if they are not identical they as surely belong to different people. The infinitesimal chance of error is still further eliminated if prints of thumb and several fingers are taken. The only requisite is that the prints be taken clearly enough to bring out all the lines.

These thumb and finger tip lines are more enduring than any other mark of the body; they do not vary from infancy to old age; the parents' prints in nowise resemble the child's; nor the twin's that of its twin. These lines persist after death, at least until after decomposition has set in. Injuries alone change them; but a scar or cut that has been printed would be additional identification. One presses his thumb tip (the natural moisture suffices) upon a pad of ordinary paper, or any such surface as wood, or glass, etc.; a jet black impalpable powder is then dusted on the imprint if the surface be white; a white powder upon a dark surface.

This finger print system of identification has erroneously been attributed to Bertillon. It was Galton who made it known to the latter, who was indeed long sceptical, preferring his own system of measurements.

The system has a number of uses apart from criminal procedures. Railways are by this means identifying employees. Banks thus identify foreigners; indeed there is one capitalist who will not permit a check of his to be cashed by his bank that has not his finger print beside his signature on this document. Some of our Government employees in the Canal Zone, as also our unlettered Indians, are paid by reference to their prints. The "his mark" of the untutored citizen is no identification at all; his finger print is an unforgeable signature.

Captain Joseph A. Faurot the head of the Identification Bureau of the New York City Police Department, would have every new born baby finger printed, the print to appear on the doctor's certificate; also every school child, every immigrant, as a basis for a really adequate and comprehensive He would have lost vital registration. identity in the United States done away with by the establishment of a Central Bureau in Washington, to which the finger prints of every member of our ninety millions must be forwarded for classification: to this Central federal bureau all other bureau, state and municipal would be con-There would be two sets of tributory. prints-one kept in the local bureau, the other sent to Washington.

Thus would the numberless unfortunates (some 38,000 yearly in the United States) found mysteriously dead, be identifiedthose dying in almshouses, in insane asylums, bodies found in rivers, the dead or injured in street accidents, in railways or steamship catastrophes. The helpless aphasic, the insane, and thousands taken ill away from their homes, could be restored to their families. The crime of infant abandonment could be detected. The finger printing of all policy holders would absolutely prevent substitution of a dead man's body for a live swindler. Election frauds could readily be ended. Finger-printed chauffeurs would not escape punishment for joy ride homicides and mainings.

IS THE MODEL TENEMENT A FAILURE?

A generation and more ago Goldwin Smith declared: "I cannot help thinking that the first and best object of charity is the improvement of the low quarters in our great cities, which cannot fail to be seed plants of disease as well as of barbarmisery"; and sanitarians and ism and humanitarians (especially those interested in anti-tuberculosis propaganda) have been zealous for the erection and maintenance of model tenements for the better and more healthful housing of the poor. The general principles underlying the establishment of model tenements are no doubt adequately expressed in Mr. Henry Phipp's deed of gift of one million dollars for building improved tenements in New York City. The tenements are expected to earn about four per cent. on their cost, after allowing a proper amount for maintenance and repairs; these earnings are intended to accumulate and be used from time to time in erecting more tenements. The rooms should not be rented at a rate below the market price; for it is not desired to discourage the building and renting of tenements by others on a purely business basis: building operations might thus be checked, rents raised and injury worked in the end to the poor. In these model tenements there should be all the light and air possible; they should be fire-proof and thoroughly sanitary, with as much air-space as possible around them for children to play in; there should be light in every room, proper sanitation and ventilation, steam heat, a gas range and a toilet to every apartment. Mr. Phipp's first tenement was designed to have two, three and four room apartments, with bathrooms only for the four room suites, for the others there are tub and shower baths in the basement, one for every six families.

Such is the general character of the model tenement which other people of means have been invited to duplicate, the altogether sane and wholesome sentiment "philanthropy with four per cent. being urged to this end." Yet the model tene-

ment for the poor has been by no means an unqualified success and for a complexity of reasons, one of which seems to be that some charitable builders are not content with the four per cent. In the metropolis and elsewhere in the United States the model tenement does not house the poor; and the Honorable James Bryce is recently reported to have declared that in London the poor are not able to afford living in them. The average model tenement tenancy in New York City, according to the architect. Mr. Henry Atterbury Smith, are "settlement workers, social investigators, writers, artists, professional men and women, several comfortably well off families of laboring men, some trades people and a good many young bachelors who keep garages and things like that."

Several metropolitan organizations—the Tenements Economies Society, the Charity Organization Society, the Pediatric section of the New York Academy of Medicine, and others—have been seeking to discover how the model tenement can be so "economized" that it will house the really poor; to this two things are considered necessary: a change in the present tenement law for New York City, which will admit of economic "open stair construction"; and the model tenement, hitherto simply an experiment in philanthropy, must be commercialized and placed upon a paying basis.

The model tenements in New York City have thus far been merely models, very beautiful ones some of them, such as the Vanderbilt tenements for sufferers from tuberculosis; probably nowhere else in the world are there more comfortable and sanitary tenements than the latter. The families of the very poor in this vicinity of these buildings have admired them immensely—and have perforce gone on living in dark and ill-ventilated apartments, where healthy existence was impossible. They have simply not been able to afford the Vanderbilt rents, nor those of the Open Stair Tenement, of the City and Suburban Homes Company,

nor the Phipps rents nor any other "model" rents on Manhattan Island. Built as honest efforts in philanthropy, they are all too costly for the people the philanthropists have meant to help.

"We need," declared Prof. Charles F. Chandler, the President of the Tenement Economies Society "a tenement that it pays someone to build, with all the necessities

of fresh air, privacy, light and space, and with low enough rents for the poor to live in it; a structure that is up to date in all its sanitary arrangements, in all the fire-proofing equipments and in all its moral requirements which will furnish homes for families with the most moderate means, and at the same time yield a fair return to the owners on their investment."

MONGRELIZED RACES.

DR Eliot, of Harvard, spoke recently of the changes immigration has wrought in the industrials, family life, and civilization generally of Massachusetts; he fears a great political evil in the lack of homogeneity now obtaining in that population. Not in a century may it become homogeneous if ever at all.

In his youth his community was homogeneous. His father's servants, the men who worked the farm, the mechanics and all the servants at Harvard, were Americans, descended from pilgrim stock-all except a decent Irishman who worked about Cambridge. Marvelous! only one Celt to a whole American community. Tempora mutantur. The puzzle to-day would be to find a single Puritan in a Hibernized (though far from hibernating) community. Dr. Eliot emphasized that there was in his boyhood but one racial element and seems to deplore our present day mixture. Yet we may, like honest Touchstone, thank the gods for our race mixtures, trusting that homogeneity may come hereafter. point to emphasize is that those superb Puritans of Dr. Eliot's youth were themselves not at all pure—that is, ethnically. There has never been since Homer, nor probably many thousands of years before the blind bard, a pure race; and providential it is that this has been so.

The English who supplanted the aboriginal Indians (themselves in all probability not a pure race) were by no means a pure type; nor were the Dutch nor the French nor the Spaniards. Take the Frenchman of to-day. In the North are the descendents of the Belgae, the Walloons and other Kymri; in the East those of Germans and

Burgundians; in the West Normans; in the centre Celts, who at the same epoch when their name took its origin consisted of foreigners of various ancestry and of the aborigines; in the South were ancient Aquitanians and Besques; without mentioning a host of settlers like the Saracens; the Tectasages, who have kept at Toulouse the custom of cranial deformities; and the traders who passed through the Phocaean town of Marseilles.

Professor Boas, of Columbia, has found that when the ratio of races intermingling is as one to nine there will be among the more numerous population only 18 to 1,000 in the fourth generation that will be of pure blood; and where two types intermarry with equal freedom, less than one person in 10,000 in the fourth generation will be of pure descent; that is, within a century the process of intermixture in this nation should be complete—homogeneity achieved!

A mixed race become homogeneous is as nearly perfect as a human race can be; and the more elements that enter the mixture the nearer will the ideal be approached. Is the reader not convinced? Look then on one of the recent pictorial pages of the Sunday Times. One sees here the photographs of the adorable "snow baby," taken during her first summer in Greenland; and so through the various eras of her existence to the culminating portrait of Miss Marie Ahnighito Peary. Here is a triumph of natural eugenics that has delighted the eye of every young fellow—and of at least one old fellow—that has had the good fortune to contemplate it. Four races have been the blessed heredity of this most winsome gentlewoman; for her father, Admiral Peary, is of English and French descent; and her mother is of German and Russian forbears.

A HOLY WAR.

WARS as ordinarily fought in civilization are in all conscience dreadful enough; never have they been more so than when from time to time they have been fought in the near East. Torture and killing of prisoners, massacre of inoffending nonbelligerents, ravishing of women, slaughter of infants-such are the accompaniments which make the dictum "war is hell" seem tame. After observing "people sometimes talk of bestial cruelty, but that's a great insult and injustice to the beasts; a beast can never be so cruel as a man, so artistically cruel." Fyodor Dostoevsky writes down something as depressing as has ever been conceived in literature: "Here is another scene that I thought very interesting. Imagine a trembling mother with her baby in her arms, a circle of invading Turks around her. They've planned a diversion; they pet the baby, laugh to make it laugh. They succeed, the baby laughs. At that moment a Turk points a pistol four inches from the baby's face. The baby laughs with glee, holds its little hands to the pistol and he pulls the trigger in the baby's face and blows out its brains. Artistic wasn't it?"*

The perpetration of such horrors seems possible only to the Oriental, exotic temperament and only in a semitropic environment, but one must not lose sight here of the part (not only in the East but in all civilization as well) which has been played by perverted religious sense. Herein is why no informed man, however calloused, could have thought with equanimity that a "holy war" might have arisen out of the Bulgar-Turkish struggle; for by comparison with such a war of religion an ordinary conflict between armed men would seem like the fist fight of a couple of school boys. For example, our Civil War

The Brothers Karamasor.

was fought for principles in which there was no issue as to religion. The conflict having been ended, rancour almost entirely ceased. Immediately upon Grant and Lee having agreed at Appomatox, Yank made fraternal share of what he had to eat and drink and smoke with erstwhile Johnny Reb. Recall now, by way of contrast, wars in which questions of religion were paramount. When the first crusaders entered Jerusalem, the Holy City, in which was the tomb of the Savior of Mankind, the ghastliest things were done, all in the name of the gentle Christ and every man bearing on his breast the emblem of the Cross. The character of the European Wars of religion in the Middle Ages-all fought to the glory of the Prince of Peace-were horrible in the way familiar to every reader of history; we need mention only St. Bartholomew, the Sicilian Vespers, the Albigenses, the Thirty Years' War, and the butcheries in the Netherlands of Alva, instigated by his fanatic master, Philip of Spain.

How can an influence intrinsically so merciful, an emotion so benignant in its essence as religion, become so perverted? Psychiatry and modern psychology assist us in a comprehension and an explanation. Religion, the instinct for reproduction, and the will-to-live are primitive basic human motives—the most primitive of all; such faculties as altruism, reason, judgment, sober and right thinking, moderation, selfpoise, are of progressively later development in human evolution. These latter faculties, so painfully matured throughout the ages, are dethroned from their supremacy in the encephalon whenever passion and racial hatreds gain the mastery over the individual; then are the primordial motives predominant, and sadly changed, because unrestrained. So that now must be expected extremest fanaticism, lust and inordinate cruelty, either co-active or mutually interchangeable in their demoniac courses.

ORIGINAL ARTICLES.

MEASLES AND SCARLET FEVER.*

How These Diseases Are Spread and How Their Spread May Be Prevented.

By Charles Herrman, M.D.

Attending Pediatrist to the Lebanon Hospital, New York.

If I correctly understand the purpose of these lectures it is to teach the public how to remain in good health and how to prevent disease. I shall, therefore, say very little with regard to the signs and symptoms of these diseases but shall emphasize the manner in which they are spread. I do not believe in giving instruction which will encourage mothers to make their own diagnosis of the disease. If a child is sick a physician should be consulted. knowledge is often a dangerous thing. Some of you may have heard of the doctor who was leaving his office in a great hurry. His wife asked him what was the matter. To this the doctor answered that Mrs. Brown had sent for him to see her boy. "I don't know what is the matter," he said, "but Mrs. Brown has a book on 'What to do before the doctor arrives,' and I must hurry up and get there before she does it."

Whatever my shortcomings may be in other respects, I have at least the advantage that I can speak from personal experience, having been a medical inspector in the New York Department of Health for over twelve years. I had an unusual opportunity to study the contagious diseases of childhood as they occurred in public schools and tenement houses and it is in these that the diseases are most frequently spread.

The subject is an important one. From 13,000 to 40,000 cases of measles with an average of 27,000 have been reported annually to the New York Department of Health during the last 10 years, and this by no means represents the total number occurring, as many cases are not reported. Of scarlet fever, 8,000 to 25,000 with an average of 15,000 have been reported annually. Nearly 1,000 deaths from each of these diseases have occurred annually during the last 10 years. Measles is usually considered a mild disease, but any disease which causes one thousand deaths annually in one city is by no means mild. Add to this the large number of complications following these diseases with the more or less permanent injury to the ears, lungs and kidneys, and you will appreciate that the subject is well worthy of our serious consideration.

I believe you will all agree that in order to successfully fight an enemy we must know how and where he is going to attack We must not waste our ammunition. Our medical, like our religious beliefs are, to a certain extent, inherited. plays an important rôle. Views are handed down from one generation to another. Some of these beliefs are so deep rooted that they are extremely difficult to eradicate. We should remember that it is much more important to know how these diseases are usually spread than how they may be occasionally spread. We hear many weird but interesting tales of how a child wore a coat of another who had scarlet fever, became infected and died. Such tales are apt to make a lasting impression. Though it is not necessary to say that such a thing is absolutely impossible, it may be safely said that if it ever occurred it must be exceedingly rare.

The theory that these diseases were "air borne" was one which, until recently, was pretty generally accepted. Those people who believed this in its most exaggerated form would close all their windows if a case of scarlet fever occurred in a neighboring house, they would go a block out of their way in order to avoid going through a street in which a case was known to be. Evidence is constantly accumulating which tends to show that at least in its original form this theory is untenable. Some years ago when I was in Vienna, groups of students regularly accompanied the professor in making rounds through the wards occupied by children suffering from these contagious diseases. There never was any evidence to show that they were ever infected by inhaling the air of these rooms. It has also been shown that if direct contact of the children is prevented by keeping them in bed and by separating the beds by partitions infection does not take place providing certain precautions are taken by the

^{*}A lecture delivered on January 28, 1914, as one of the course of Free Lectures on Health and Hygiene given under the auspices of the Social Service Department of the Lebanon Hospital.

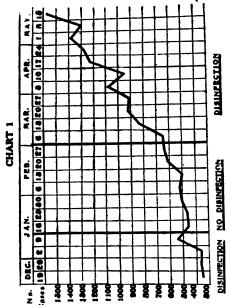
nurse. This would not be the case were it possible for the infectious material to float in the air and descend into the neighboring beds. By the use of such partitions we prevent the direct contact of patients and the possibility of the nasal or aural discharges of the one coming in contact with the mucous membranes of the others.

A second way in which the infectious material was supposed to be carried was by means of what is known technically as "fomites"—that is, articles of clothing, bedding, etc., which had come in contact with the affected individual. In no disease did this seem more certain than in yellow fever and still it has been conclusively demonstrated that the disease is not spread in this way. Men have slept in beds previously occupied by yellow fever patients—the bedding linen not having been changed—and have not contracted the disease. It has been shown that the infectious material is carried by a certain variety of mosquito. For a long time Egyptian rags were supposed to be especially dangerous in their possibility of conveying contagious diseases, but a thorough investigation by Dr. Doty, then medical officer of the Port of New York, showed that such was not the case. I am also able to cite a personal experience. A member of my own family was for many years in the woollen rags business in which hundreds of young women were employed in sorting these rags, which included all kinds of wearing apparel some of which was undoubtedly worn by persons having contagious diseases. These rags were not fumigated or cleaned, nevertheless, there never was any reason to suppose that any of these women were infected.

The third supposed source of danger was the rooms vacated by persons having a contagious disease. One of the most frequently cited examples to prove this danger is that of Brouardel. During eleven years 23 clerks contracted tuberculosis in one office. But why assume that the room was responsible? Is it not far more probable that one tuberculous individual infected another by contact, that is through carelessness in coughing or in the disposal of the sputum? Persons not things, are the chief offenders and the principal source of danger.

On the assumption that rooms harbored the infectious material the value of disinfection was naturally very much overrated. The cost of disinfection in a large city like New York was considerable, approximately \$55,000 annually, of which about \$22,000 was

required for disinfection after measles. In January, 1909, the Department of Health of the City of New York discontinued disinfection of rooms after measles (Chart 1).

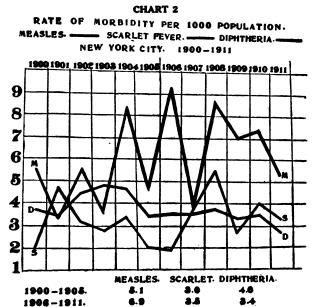


During the following 7 weeks there was no marked rise in the number of cases but such an outcry arose from the Borough of Brooklyn that the Department was forced The number of to resume disinfection. cases increased as is always the case when the disease is epidemic, entirely unaffected by disinfection. During the last year disinfection after measles has been abolished and there has been no appreciable increase in the number of cases as against previous years. The manufacturers of disinfectants naturally wish to sell their wares and make all kinds of exaggerated claims as to their value. I remember distinctly the time when, if a case of malaria or diphtheria occurred in a family, a plumber was immediately sent for. Defective plumbing and sewer gas were held accountable. The purveyors of disinfectants have taken advantage of these old beliefs which are now known to be without foundation, and advise pouring their solutions into the sinks, pipes and cellars. Exposed vessels containing these solutions and sheets saturated with them are of no value. Possibly a red sheet (especially appropriate in scarlet fever) would be valuable as indicating danger to persons about to enter the room occupied by the patient. However the principal objection to the use of disinfectants is that they give a false sense of security and as a result many important precautions are not taken.

The desquamation or peeling of the skin in measles has not been considered dangerous,-but that of scarlet fever has always been so considered. This is entirely without scientific proof. Experimentally the scales have never produced the disease. In the children's ward of the Lebanon Hospital we have had a number of children with disease of the kidney following scarlet fever. Some of these were still in the stage of desquamation, but no other child in the ward contracted the disease. If such patients are free from discharges from the throat, nose and ears the danger is nil. That the peeling of the skin is not responsible for the spread of the disease is shown by the fact that the scarlet fever patients are not discharged from the hospital until there is absolutely no sign of peeling. These patients return to their homes and occasionally in a few days another member of the family is infected. On investigation it is usually found that the hospital case still has a discharge from the nose or ears. In the tenements I have frequently seen the brothers and sisters of the patient convalescent from scarlet fever helping him pull off the loose skin and providing there were no nasal or aural complications such children were never infected.

The most dangerous patients are not those with a straightforward attack of these diseases. These are easily recognized and isolated, but the very mild cases are frequently unrecognized. These so-called "carriers," in-

dividuals who harbor the infectious material in their nose or throat, go about innocently infecting others. By referring to Chart 2, it will be seen that though the number of deaths from measles and scarlet fever had been decidedly reduced the prevalence of these diseases is as great as ever. In the case of diphtheria, however, both the death rate and the morbidity have been reduced owing chiefly to the use of diphtheritic anti-toxin for prophylactic and curative treatment. One of the chief reasons why it is so difficult to prevent the spread of measles is that the disease is highly contagious at a time when it is usually not yet recognized, that is before the eruption appears. The child sneezes and coughs and is for the time being a "carrier" and in sneezing and coughing, infects all the children in the immediate vicinity. It is this direct close contact of children which is so dangerous and so difficult to prevent. Some years ago I made an investigation in two large public schools of the number of pupils who had pocket handkerchiefs and found that about 25 per cent. were so provided. But it must be remembered that not all who had them used them regularly by placing them before their mouth or nose in coughing and sneezing. I think it would be well to teach all children, even the youngest, to do this and to provide those who cannot afford to buy linen handkerchiefs with those made of paper. It is a significant fact that the diseases which are most contagious, namely, measles, whooping-cough and in-



fluenza, are regularly associated with sneezing or coughing.

Measles is a very contagious disease; scarlet fever is much less so. Measles is not usually a dangerous disease for children of the school age, but it is dangerous for infants. It is, therefore, not advisable purposely to expose children to it. It is not absolutely necessary for all children to be infected at some time. The usual argument is that as they must contract the disease sooner or later it is better for the children to have it before it interferes with their attendance at school. However, we never know in advance whether the disease will run a mild or severe course. Complications may arise, especially in weak children, and in those predisposed to tubercu-Scarlet fever is a treacherous dislosis. A case may be apparently mild and suddenly become severe. Its complications are frequently serious. A mild case may give rise to a severe one. The public schools have often been held responsible for the spread of scarlet fever. At least as far as the City of New York is concerned my own experience and observation does not confirm this. As a medical school inspector I have watched epidemics and have never found a large number of cases within a short time in the children of one class-room. My investigations have shown that the disease spreads to other children living in the same tenement, to playmates and to members of the same family. The seasonal incidence of the disease shows that though the schools open before the middle of September there is no distinct increase in the number of cases of scarlet fever until December. The Christmas holidays have apparently no effect, the number continuing to increase at that time. In May and June, before the schools close, there is a marked diminution in the number of cases and the small number during July, August and September is simply a continuation of this decrease.

Second attacks of measles and scarlet fever are rare. Frequently an attack of German measles is so diagnosed. After an undoubted attack of measles it would be well to obtain a certificate from the attending physician in the same way as it is now obtained after vaccination. If another member of the family contracted the disease at some later date this certificate would make it possible for the child to continue at school. Now that the regulations of the Department of Health of the City of New York are much less strict, there is no reason

why all cases of measles and scarlet fever should not be reported. It was formerly not uncommon for parents to request their attending physician not to report such cases because the other children of the family would be compelled to stay at home.

The length of time which a patient with scarlet fever should be isolated varies in different cases and it is very difficult to give a definite number of weeks. Very mild cases might often be safely allowed to mingle with others at the end of three weeks whereas others with nasal or aural discharges might require a separation of several months. The Department must of necessity err on the side of safety and in uncomplicated cases requires isolation of five weeks.

A few words with regard to treatment. The patient's room should be separated as much as possible from the remaining rooms and there should be as little as possible in There should be plenty of air and light. During the first day or two of measles the eyes are sensitive and it may be necessary to prevent the sunlight from shining directly into the patient's eyes, but it is not necessary to have the room pitch dark. Such a gloomy room only tends to depress the child. We are beginning to appreciate the beneficial effect on the patient of cheerful surroundings and are preventing everything that tends to cause him discomfort. In these cases good nursing is more important than drugs. Do not be afraid of fresh air or cool water, both are necessary. The eyes, nose, mouth and throat should be kept clean. Adenoids, enlarged tonsils and carious teeth predispose to complications in the neighborhood of these parts. No visitors should be allowed in the room. The nose and throat as well as the hands of the nurse should be cleansed regularly.

As to whether home or hospital treatment is the better, I should say that if the patient can be properly isolated and can have a physician and nurse by all means keep him at home. The chief objections to hospital care are that the nurse must take care of at least a half a dozen patients, in the time of an epidemic, and when the wards are overcrowded many more; mild cases are frequently kept in the same ward with severe cases with complications. Children admitted with one disease frequently contract another. However, where the people are poor and have a number of other children, and where isolation is impossible the patient should be sent to the hospital.

MISTAKEN IDEAS ABOUT THE SKIN.

By WILLIAM S. GOTTHEIL, M. D., Attending Dermatologist to the Lebanon Hospital, New York.*

THE late Colonel Ingersoll was fond of lecturing on the "Mistakes of Moses." which always struck me as a rather unjust and misleading title, since with all the changes and advancements of some thousands of years of human progress, the Truths of Moses are far more noteworthy than his errors. I trust that the title of this talk will be open to no such criticism; the danger of which I hasten to forestall by admitting that, on the whole, we take care of our skins fairly well. If we subjected the outer covering of our bodies to influences similar, for instance, to those that we cause our digestive apparatus to submit to at this holiday period of the year, a large portion of this audience would appear here swathed in bandages.

In a general way civilization has brought with it improvement in the care of our integument; but this improvement has been by no means a steady progression. immediate ancestors of the North European races paid but little attention either to the hygienic or the aesthetic aspects of the case; being in this as in many other respects far behind the Greeks and Romans, whose elaborate aqueducts and public baths, as well as the detailed instructions as to the care of the skin, hair and nails, have survived as evidences of their advanced civilization in this respect. The knight of chivalry and the troubadour of romance were probably evident to the sense of smell as well as to those of sight and hearing when approached, disguised though their natural odors were by strong scents; and the condition of people of the ordinary kind, bathing rarely or not at all, with underclothing that was worn until it fell apart and leather outer clothing worn for a generation and possibly inherited, can be better imagined than described. It reminds one of the bon mot of the Frenchman, who defined l'esprit du peuple as the odor of sweat and old clothes.

We have advanced far since those days; and if I call attention to certain errors that seem still to persist, and which stand in the way of further hygienic and aesthetic progress in this direction, it is in no carping spirit. And it is to the female portion of my audience more especially that my remarks will be addressed. Half of our human beings are females; and to this half the care of at least another quarter of humanity, our children, is confided. Their field is therefore larger, their opportunities greater, and their responsibilities more serious, in this respect, than those of the males. And the female portion of humanity is conservative; it clings to the old, the known, and the tried. This conservatism is most marked, naturally, in those functions, duties, and occupations which inevitably fall to their lot,childbearing, the rearing and education of children, the kitchen, etc. If any of my masculine hearers have ever attempted to introduce an innovation, mechanical or other, into any of the departments of his household, he will understand what I mean.

Naturally, the first subject that I touch upon is that of cleanliness, the use of soap and water on the skin and its appendages. Some curious ideas are prevalent on this subject. Many hold the use of water, more especially of hot water, to be weakening; others believe that mere immersion, even in salt water, is cleansing; and others again object to the use of soap, especially on the face, as irritating and undesirable. None of these are really the case.

A general hot bath at least twice a week, with plenty of a good bland soap, is a necessity in our cities, where our body surfaces receive not only the influences of the dead surface cells that are continuously being cast off of the secretions from the vari-

^{*} A lecture delivered under the anspices of the Social Service Department of the Lebanon Hospital.

ous skin glands that so readily decompose, but also the soot, bacteria, and all manner of impurities that are constantly present in the atmosphere that surrounds us. I myself am enthusiastically in favor of a daily warm bath, and advise its use wherever circumstances permit. This need not be very hot, and should not be prolonged; it is not enervating, but the reverse; and if followed by a cool or cold sponge or shower may be a direct tonic and stimulant. skin that is healthy to begin with will be hurt by the frequent or even daily use of a bland soap, especially a glycerin soap. It is true that there are rare cases in which bathing causes itching and irritation; very often these can be relieved by the use of a little bland oil, such as almond oil, after the bath; if this does not do so, these individuals are suffering from a distinct disease of the skin, which needs skilled attention.

This leads me directly to the subject of the care of the hair, in so far as cleanliness is concerned. When we remember that some of the largest sebaceous and sweat glands in the body are directly connected with the hair, and pour out their secretions onto and around their shafts; that the oily meshwork of hair is a sieve that filters out from the atmosphere all the extraneous matter that it contains, that combing and brushing will not remove this matter, one would suppose that it would be worn as short and washed as often as possible. "Where there is hair there is dirt." as the Prussian martinet said when he ordered all his soldiers to have their hair cropped as closely as possible. Now, of course, I am aware that women must wear their hair long, and as long as possible, and I also know that washing long hair is a tedious and Nevertheless, these troublesome process. things are no valid excuse for the custom of most women in this respect. I believe that once a month is a high general average of frequency; and that in many instances it is done only once in six weeks or two months, or even only once or twice during the winter. This is absolutely insufficient, both from a hygienic and an aesthetic point of view. Once a week is desirable, and once in two weeks the least that should be employed. A good soap should be used; and if, after the shampoo, the hair remains too long unmanageable, there is no objection to the employment on the scalp of a very little oil or white vaseline. And another most important object is subserved by a

more frequent washing of the scalp and hair. Insidious scalp affections that finally lead to that thinning and loss of hair which so commonly troubles women in later adult life can be largely obviated in their effects by frequent washing.

SOAPS AND FACE POWDER.

This leads me directly to the consideration of what is called "dandruff," usually dismissed as a trivial discomfort. Of itself, certainly it does not amount to much; you may have it for years without suffering more than occasional itchiness and the untidiness occasioned by the constant falling of the white scales. But when finally your hair begins to get thin on top of the scalp, and the hair line begins to recede on the forehead, you commence to realize the fact that dandruff is a symptom of an insidious disease of the scalp, which finally causes shrinkage and disappearance of the hair roots themselves. Almost every case of slow and general falling of the hair is due to this affection; it is mildly contagious, and is doubtless transferred from one person to another by the fingers of barbers, haircutters, and massage artists. It may be held in abeyance, and its final effects prevented for many years by cleanliness and the frequent use of soap and water; but the right course to pursue is to recognize the fact that it is a symptom of disease, and to have it treated and cured. can always be done, and the hair can be stimulated to renewed and vigorous growth if the process has not gone too far. When all the tissues of the scalp have become atrophied from the long continuance of the disease; when the skin covering the head is tight drawn, smooth, and shiny, all the hair roots have disappeared, and no power on earth can put them back again. It is evident from what I have said that all the so-called hair tonics, hair renewers, and hair growers are delusions and frauds; and that the practice of scalp massage by barbers and others is not a means of avoiding baldness and promoting hair growth, but rather the reverse. In most cases it directly promotes the trouble that is at the bottom of the condition.

A few words now about that common affection of the skin of the face that may be classed as "pimples," and which the doctors call acne in its various forms. Adolescents are most subject to it, though it sometimes persists to middle life. Most people, and I am sorry to say, many doctors

would dismiss this affection as unworthy of serious consideration; yet it is always unpleasant and disfiguring, and bad cases. occurring as they do so frequently in young girls, may be a very serious cause of unhappiness. The common idea that it is due to "impurities of the blood" has no basis that we know of; it is due, in the great majority of cases, to local infections of the overactive skin glands with the pus organisms that are always round about us. Hence the uselessness of taking internal medicines, blood-purifiers, sarsaparilla, and any of the thousand and one remedies that are advertised for its cure. Careful and persistent local treatment and hygiene of the skin is the only effectual remedy for it; everything else, including internal treatment and the use of vaccines, is in my experience a delusion and a snare. Not that I would be understood as saying that internal conditions are entirely without influence upon the disease. The excessive use of sweets or acids, chronic gastro-intestinal disturbances, anaemia and chlorosis, and other general disorders, may aggravate acne by throwing increased strain on the eliminating functions of the sebaceous glands of the skin. But in its essence the disease is due to external infection; and it can be cured and is being cured every day by those who recognize this fact.

Closely allied to this subject is that of abnormal hair growth on the face; again a condition which in bad cases and especially in young girls amounts to a misfortune, and is well worthy of our attention; and here again also the commonly recommended and advertised remedies are efficient only for increasing the manufacturers' income. Depilatories of all kinds are but little better than shaving, and not so good as pulling out the hairs; in every case the hair root remains, and renewed hair growth quickly occurs. Two remedies, and two remedies only are at our disposal for this distressing affection; one is uncertain and not free from danger, and the other is tedious, slow, but effective and permanent. I refer to the use of the X-ray and that of the electrolytic needle. latter is the one to be employed by preference; in the hands of an expert it is safe, painless, non-deforming, and sure. would emphasize the word "expert." The process is a delicate one, and to be performed surely and safely it must be done by one well acquainted with the anatomy of the parts and with powers of the instruments employed. I have seen the most unsatisfactory results, no real destruction of the hair roots and bad scarring of the face, from non-professional work of this kind. In the proper hands electrolysis is perfectly successful, very little painful, and leaves the face entirely unmarked. It is applicable to all vigorous hair, save perhaps that occurring on the upper lip. Lighter downy hair can only be removed by the X-ray; and here I speak with some hesitation. The process has its distinct and serious dangers, and should only be used by the medical expert. It is my custom to advise non-interference with growths of downy hair, unless it is very abundant; and I use the X-ray only in very marked cases, and with the distinct understanding on the patient's part of the difficulties and dangers involved in the process.

And now I cannot better conclude these rather desultory remarks than by emphasizing the fact that of all the mistakes we are liable to make about the skin perhaps the worst is to rely on advertised remedies and cures. I know that I lay myself open to the charge of self interest; but I am quite willing to bear that burden. When we remember that our integument is a very extensive, complicated and vital organ; that the number of recognized and distinct diseases to which it is subject goes up into the hundreds; varying in seriousness from trivial discomfort and disfigurement to fatality; that multitudes of men all over the world are devoting their lives to the study; we must admit the fatuity of the patient's diagnosing his own case, the futility of an application that is a cureall, and the inefficiency of commercial "institutes" to do the work of scientific diagnosis and rational treatment. Years ago I was connected with a medical institution that was situated a block away from a so-called dermatological institute; and this institution supplied our dermatological department with a constant stream of patients. We in the profession must take some of the blame at least on our shoulders if advertised cureall remedies still have vogue, and beauty parlors and dermatological institutes still have multitudes of patrons. We have been too prone to dismiss cases of acne and similar ailments with the dictum of "over-acidity of the blood" and an internal remedy, or to prescribe poslam or unguentine or some other

unknown but easy external application. Meantime it is our duty, who know better, to point out to the public the dangers of insufficient diagnosis and inefficient treatment, and to indicate to them at all events, the way which they should go.

A POSSIBLE CANCER CURE.

THE cancer situation suggests the inexorable law of compensation upon which The medical profession. Emerson dwelt. with its humanitarian allies, has in recent years fought with much success tuberculosis, the veritable Captain of the Men of Death, and has notably reduced the percentage of his victims. The cancer mortality seems pari passu to have undergone a reciprocal increase. Young people do not now die so much of tuberculosis-that disease of adolescence and early middle life; they live rather to succumb in later years to cancer.

The law of compensation again asserts itself in that, whilst tuberculosis destroys mostly civilization's submerged strata—the exhausted in body and soul, the wretched, the starved, the physically-degraded; cancer, on the other hand, does its gleaning rather among the well-to-do in life, those who have never felt the stress of poverty. those accustomed to sanitary and eupeptic existence. In London, for example, the greatest mortality is not in the East End. in "Darkest London," but in Hampstead, Marylebone and Chelsea, which are of that city's wealthiest vicinities. In New York the crowded tenements are comparatively immune; whereas cancer evidences its preference for the more healthful and the betterto-do parts of the metropolis.

Indeed salubrious, "good-living" conditions would, strangely enough, seem for cancer a congenial and fruitful environment. Cancer and gout, one would think, drive tandem. Patrician cancer has a predilection for the homes of the prosperous,

scorning those of the squalid and the miserable; it is comparatively infrequent (although of course it occurs) in prisons, workshops and insane asylums. Prostitutes rarely suffer; is this because these poor victims of the world's basest passions so seldom reach advanced age,—let alone middle life? Cancer loves a shining mark—it has a venomous penchant for the illustrious, those of great worldly importance, those whom communities and nationalities can ill spare, those who have, through many years of superb activity, fairly earned otium cum dignitate, a serene and respected old age.

How vital then should be a certain cure of cancer. Scientists devoted to the service of mankind have now for decades past been patiently and most zealously at work on cancer problems; and their efforts have been and are most nobly seconded by people able to provide the means by which such work can be done. Therapeutic measures have been devised, none of which can be said to be measurably successful. The knife has thus far afforded the cancer patient the most hope; yet recurrences after operation are pathetically frequent.

It is therefore with utmost gratification that one considers the application of chemotherapy to cancer (or carcinoma).

It is Ehrlich who formulated the principle of chemotherapy, upon which has thus far been based the treatment with "606" or salvarsan, a therapy positively curative of syphilis, one of the most dreadful of human diseases. In chemotherapy substances are found which have a greater affinity and toxicity for parasites or dis-

eased cells. Wassermann and his great associates have made application of this principle of chemotherapy in their experiments upon malignant tumors (cancer or carcinoma and sarcoma) in mice. We may not here consider the pathology of such tumors; it must be noted, however, that one finds invariably in these malignant growths "tumor cells," which are abnormal and are manifestly essential elements of the cancerous or the sarcomatous process. (Sarcoma is a malignant tumor even more virulent and more rapidly fatal than cancer.)

Wassermann has found that a compound. of eosin and selenium, when in contact with malignant tumors in mice, is taken up selectively by the pathological tumor cells. Daily injection of this compound into the blood stream in these mice was found to cause within three days, a softening of the tumor; and its total resorption within ten days. For this result the tumor must not be too large in proportion to the body weight of the animal—in the mouse not beyond the size of a cherry. With larger tumors the drug would give severe, even fatal intoxications, apparently by reason of the rapid absorption of the products of disintegration of the tumor cells. In the recovered animals, after several months' observation, the tumors have totally disappeared, without any recurrence. Recurrence of the growth was found, however, when

insufficient treatment had only partly destroyed the tumor.

Unquestionably this work of Wassermann and his associates, based upon the epochal principle of Ehrlich, justifies the hope of a cure of human cancer. Yet it is obviously imperative to observe also that we have here but the beginning of a long series of most arduous experiments, which must extend over years and which must, as of course it will, enlist the loyal and earnest co-operation of clinicians, chemists, pathologists and bacteriologists. Consider how Ehrlich was not satisfied, nor ready to give to the world until after his 606th experiment, salvarsan, a cure of a disease which unlike cancer, is in itself rarely fatal.

Nor can we too much laud this conservative statement of Wassermann's: merely establishes an essential scientific fact, namely, that the existing view that it may not be possible to have chemical substances specifically pass out of the vessels into a tumor and destroy it, is untenable. We wish most particularly, in order to prevent false hopes and excitement among persons with tumors, to emphatically point out that at the present time we have no evidence that this substance will act in the same way with human cancers. We have not yet investigated this question. It may well seem not impossible that an essential beginning has been made and a solid foundation established, extension of which along these lines may yield progress in human therapy."

THE OCCUPATIONAL DISEASES, THEIR CAUSATION, SYMPTOMS, TREATMENT AND PREVENTION, by W. Gilman Thompson, M. D., Prof. of Medicine, Cornell University Medical School, Visiting Physician to Bellevue Hospital, by D. Appleton & Co., New York and London, 1914.

WITH the advance of civilization many occupational diseases have progressively developed. And since Workingmen's Compensation Acts have been and are constantly being passed by State legislatures, the subject has become of the first importance to both physician and layman. Only an examination of such a work as this of Dr. Thompson will reveal the many and the

dreadful dangers to life and health confronting the twentieth century workingman. Though many most valuable monographs have been published of recent years in the United States on occupational diseases, practically all the standard works of reference on this subject have been by English or Continental authorities. There has been no modern treatise on the subject by an American authority on industrial hygiene.

Professor Thompson's book is heartily recommended to physicians, scientists, economists, sociologists, humanitarians, men in insurance, legislators and clergymen for whom, though it could not furnish a text, it could nevertheless furnish many an idea for a sermon. There are 118 illustrations. The price is \$6.00 net.

THE THERAPEUTIC VALUE OF FOOD IN DISEASE.—A GENERALIZED BIOCHEMIC STUDY OF NUTRITION.

By Theodore William Schaefer, M.D., Kansas City, Mo.

Continued from the June Number.

THE DIETETIC TREATMENT OF DISEASE BY MEANS OF PROPERLY SELECTED FOOD.

THERE are a number of constitutional diseases, known as nutritional disorders, that are dependent upon dietetic errors. It is a discouraging fact, however, that we do not know anything positive concerning the real pathogenesis of these diseases. Therapeutically we of necessity must treat these diseases empirically. Dietetically we have not yet made any great advancement in the treatment of these diseases, excepting in scorbutus and infantile scorbutus. Among the diseases that can be successfully managed and cured by dietary treatment alone scurvy affords us a striking example. The chief etiological factor of this disease is apparently an insufficiency of a particular kind of appropriate food—an unsuitable ogy of digestion as absolutely true. In redietary long continued, that is defective in the necessary constituents of tissue anabolism, the normal histogenesis being disturbed and altered by the absence of the essential potassium salts, present in fresh vegetables, that have been withheld as nutriment. In the rational treatment of this disease we employ the properly indicated food for the purpose of supplying nourishment and also providing the constituents that are necessary for the maintenance of the physiological processes of the body. Upon the institution of correct dietetic principles the disease known as scorbutus has been diminished more than 90 per cent. An antiscorbutic dietary—fruits and fresh vegetables, orange or lemon juice, meat juice and milk -successfully meets the chief therapeutic Salt meat is not a cause of indications. scurvy, except as excluding more nourishing and digestible food. The above mentioned aliments furnish the substances needed to supply the tissues that are defective of the necessary potassium salts. There are, of course, skeptics, like Fürst, for instance, who claim that neither ash nor any of the alkalies play a part in the incidence of the disease. Searching for a phantastical, mythical cause does not enrich our fund of knowledge! There are a few diseases which can be more promptly cured or, still better, prevented by judicious dietary and hygienic treatment, than scurvy. Infantile scorbutus, if brought under the proper regimen of an antiscorbutic dietary—mother's milk or fresh cow's milk, meat juice and orange juice—successfully meet the principal indications of treatment.

When an infant is fed on condensed milk, on boiled milk or on one of the proprietary foods, scurvy often develops. A wrong diet is the responsible and underlying cause of scorbutus. Since the introduction of the antiscorbutic dietary the number of cases of scurvy has vastly diminished.

Possibly the origin of many diseases is to be looked for in the long continued assimilation of defective and inappropriate food. Certain panepidemics have disappeared from the map of Europe. There certainly must be a cause for this. Diseases like smallpox and syphilis, for instance, have changed in their virulence and have become milder in recent times. The disappearance of that deadly pestilence of the fourteenth century, known as "black death" or Oriental plague, that terrorized and devastated Europe, has been attributed to the introduction of the potato as food, which, it is supposed, has favorably modified the system against the encroachments of this terrible

Our improved mode of living, aided by the advanced methods of sanitation and hygiene, and, especially, more generous alimentation, chemo- and serum therapy, have undoubtedly a great deal to do with the lessened virulence and increased attenuation of these diseases.

DISEASES THAT ARE CAUSED BY A WRONG DIET.

As our knowledge of pathology increases there is no doubt that there are a number of other diseased conditions of the type of scurvy that are due to a wrong diet, whereby the body becomes defective in its protective constituents that are so essential to the maintenance of its chemical equilibrium and integrity. Among the diseases that respond to certain histogenetic elements, such as the preparations of the thyroid gland, is myxedema. The prime requisite in this disease is the administration of the thyroid gland and its extracts. It is possible to hold the symptoms under complete control by continuing the administration of the remedy throughout life. There is a wide field open for original research in the treatment of disease by means of ferments, secretions, serums, and toxalbumins, the chief object being, by means of organotherapeutics, to supply the body that suffers from a deficiency of certain constituents, with the proper normal material. The realization of such treatment would be an ideal one and the most satisfactory example of rational thera-There is no question but what there are many forms of disease, whose pathology is doubtful or is supposed to be caused by infection alone, can be traced to inappropriate food. Indeed, many constitutional disorders are dependent upon dietetic errors. In a word, wrong diet furnishes the origin for a number of pathological disorders under the heading of food-infection and ptomain-poisoning. Without contaminated and infected food they are not possible. A continued food infection, caused by a slow introduction of toxins and toxalbumins present in food will lower the bodily vitality. It furnishes the pabulum by which a so-called inherited predisposition may develop into active disease as in the case of tuberculosis, which is primarily a local infection that becomes general after a while, etc. When the bodily resistance has been lowered it is no longer immune. The retention of foreign or noxious matter derivable from food is a real cause of disease. Some

diseases have their origin in the constant accumulation of foreign matter in one part or another of the organism, and all the manifold pathological manifestations expressed by their presence serve merely to distinguish the different conditions arising from this common cause. It is obvious that the locality, nature and composition of these accumulations may give origin to the most kaleidoscopic symptoms. It is the conviction of many that the fons et origo mali of gout, arterio-sclerosis, chlorosis, appendicitis, diseases of the liver, the kidneys, the nervous system and many other obscure pathological conditions are to be looked for in perverted processes going on in the bowels, where disturbances have been caused by inappropriate food.

According to the physiologist, G. Bunge (Lehrbuch der physiologischen und pathologischen Chemie, 1894, p. 118-119), there is no organ of our body that is so much abused as the kidney. The stomach reacts when it is filled to excess. The kidneys must bear patiently every abuse. This ill-treatment is first recognized when it is too late to remove the ill effects of long continued abuse. Are our kidneys really adapted for the purpose of eliminating the unnecessarily large quantities of salt used in our food? By the assimilation of meat and bread without the addition of salt we eliminate not more than from 6 to 8 grammes of potassium salts from our body in 24 hours. By the ingestion of potatoes with the corresponding addition of common salt over 100 grammes of potassium salts are driven daily through Should there be no danger the kidneys. connected with this?

Bunge further directs attention to the fact how trifling the work of the kidneys is when rice is used as food. Only 2 grammes of potassium salts are eliminated in 24 hours. The superiority of rice over potatoes is evident from the fact that the majority of mankind—the Persians, the Hindus, the Chinese, and Japanese—have been nourished by it for thousands of years. Would it not be well to employ rice as a diet for those who have kidney troubles? The same is applicable to stomach diseases, because potassium salts irritate the mucous membrane of the stomach and rice is poorer in these salts than any other nutriment.

THE DELETERIOUS EFFECTS FROM THE CONSTANT INGESTION OF INSUFFICIENT AND INAPPROPRIATE FOOD.

It is the conviction of the writer at the base of most of the varied pathologic manifestations a grave dietetic error is perpetrated in a long continued use of the same diet. This may be rich in proteid food, but is often poor in fats, fruits and fresh vegetables. The trouble appears to be that many persons, forced by circumstances due to economic reasons, persist in subsisting upon one kind of foodstuff for long periods of time that is wholly inadequate to completely nourish the body. It is evident that in the course of time a long continued use of such an irrational diet will seriously lower the opsonic index of the body. It loses its solidarity or density, as it lacks in the necessary and essential protective constituents and thus becomes more or less vulnerable and susceptible to disease.

The subject of nutrition has been studied in Europe for a long time. Most of our ideas on nutrition are from Germany. Alimentation materially influences the development of the animal as well as man. The matter of food supply is of particular importance to the population in general, especially the young children, among whom the diet should receive the very first attention. It should be highly nutritious and rational. Many children are literally fed to death on arrow root, tapioca and sago. These are not complete nutriments and are incapable of promoting the growth of either bones or flesh.

The ill effects of an improper feeding en masse has been noticed collectively in large

charitable and other institutions of the state, which have become literally hotbeds of tuberculosis and other marantic diseases. Here verily a great crime is committed by the unscrupulous political office-holders who desire to conduct these institutions at a great personal profit.

A large number of school children belonging to the indigent, lower classes are undernourished from the constant ingestion of poor, inadequate food and many suffer from the consequences of a long continued malnutrition.

These underfed, undernourished children offer indeed very little resistance to any of the acute infectious diseases to which they may be exposed. They are liable, on account of their increased vulnerability, and also in some cases for reason of the great water content in their tissues, to succumb to the inroads of disease.

An adequate and healthy alimentation is also especially momentous in times of epidemics.

The chemistry of the human nutritive food material and food accessories is of great importance in times of famine, when it depends upon economizing with the supplies at hand and devises means and ends for producing proper food substitutes. A properly selected diet will save many patients and avoid a protracted convalescence in others. In surgical cases the question of diet is all important, as a nourishing and suitable diet has not a little to do with the speedy healing of wounds.

THE MILK FALLACY.

MOTHER'S MILK IS THE ONLY REAL FOOD FOR THE NURSING INFANT.

An infant needs relatively more proteids than fats and carbohydrates in order to build up its organism. The adult, however, needs relatively less proteids and relatively more fats and carbohydrates to keep the organism in a general bodily equilibrium. It is a very important fact that in the early period of life the infant does not possess a starch digesting enzyme. (König). Fat is not readily digested. Milk is the normal food for the infant and not for the adult!

It is, therefore, a great mistake to feed anemic and convalescent persons, who possess good bony structures, exclusively upon milk, in order to intensify the hemoglobin formation in the blood. It is a fact that milk is not rich in iron.

The so-called "milk cure" is, therefore, simply a starvation treatment. The supposed beneficial effects of milk treatment have not been realized by its enthusiastic advocates. It is a fact that an exclusive diet

on milk will cause anemia. Large quantities of milk should not be partaken of by persons with weak digestive organs as an evening meal, because it is likely to disturb the stomach during the sleep. A persistency of an exclusive diet upon milk causes finally a feeling of repugnance to its further use, as is perceived by the early appearance of symptoms of dyspepsia. A forced diet on milk is likely to cause anemia in the course of time, as milk is not a complete food for an adult person. It does not possess sufficient nutritive ingredients to sustain the adult body. In milk there are not enough carbohydrates for the sustenance of the average man.

But few physicians know and even realize the deleterious effects of a diet of milk in febrile diseases (typhoid fever) and inflammatory conditions of the stomach and intestines. Reasonable caution should, therefore, be exercised in its use in these affections. Over sixty per cent of milk, when ingested, passes as water through the emunctories.

Of the nutritive salts, which the growing body needs, are pre-eminently lime and iron. The nursing infant possesses the necessary supply of iron stored in its tissues and in the spleen, which it has received from its mother as the most valuable constituent for the development of the blood and muscles. The infant begins to receive its independent supply of iron after its period of nursing. For this reason mother's milk is not rich in iron; on the contrary, it is one of the nutriments that is poorest in iron. For reason of its great content of lime salts the milk subserves its most important mission in the building up of the bony framework.

The views of the authorities differ in respect to the digestive secretions of the nursing infant. Very little is known concern-

ing the functions of the intestinal tract of the foetus, though it has been demonstrated that the stomach contains pepsin and rennin after the fifth month, their presence indicating a certain amount of glandular activity. In the infant the pancreas remains in an undeveloped condition for five or six months after birth, and the action, therefore, of its secretion is very feeble indeed.

"Grau ist jede Theorie!" says Goethe in his "Faust." Contrary to what we should infer from a priori reasoning the digestive tract of the infant is proportionately long, instead of being short in the suckling infant, notwithstanding the fact that its chief food is of a proteid nature.

The first scientific investigations of the intestinal tract of the infant were conducted by Schwan. He discovered the interesting fact that the length of the intestines as compared with the length of the body is considerably greater in the infant than in the adult. It is claimed that this corresponds to the relatively greater requirement of food. Orban and Weinland have lately studied the intestinal secretions. According to these authors, the secretion of the small intestine in the new born contains a ferment, lactose, which is capable of decomposing lactose. Moro and Jakubowitch, in contradiction to Korowin and Zweifel, affirmed that the pancreas secretion of the new born possesses a diastatic activity, which is small when compared with the lipolytic and proteolytic activity. (Dr. Frank Neff quoting Pfanndler and Schlossmar.) Under normal conditions, no residue of milk should be found in the faeces of a nursing infant, but the white flecks or clumps frequently seen, are, as would be expected, more often due to the presence of fat or soaps than to the presence of casein. Casein, however, if found in an infant's stool, is always pathological and appears in rounded clumps known as curds, which vary from a pin's head to a hazel-nut in size. These masses respond to protein reaction.

A recent statement points out the dangers from exposure to the various kinds of dust. There are three kinds: factory, house and street dusts. While among males generally in the registration area of the United States 14.5 per cent. of all deaths are from consumption, the mortality among grinders from this disease is 40.2 per cent. and in hardly any of the dusty trades is it below

25 per cent. The percentage of deaths from tuberculosis among all those exposed to metallic dust is 36.9 per cent; to mineral dust, 28.6 per cent.; to vegetable-fibre dust, 28.8 per cent.; to mixed animal and other forms of dust, 32.1 per cent.; to street dust, 25.5 per cent.; and to organic, or dust coming from the articles being manufactured, 23 per cent.

CORRESPONDENCE

A CORRESPONDENT asks how a diet of raw eggs, taken in large numbers "for the purpose of building up cases of a badly rundown condition, anemia, nervous exhaustion, etc., compares with the exclusive milk diet."

Neither is best as an exclusive diet for such conditions. The following is an appropriate dietary:

All foods that produce fat and blood, if easily digested. Thick soups, fish, raw oysters, small clams.

Meats, etc. Beef, chopped or scraped meat, mutton, chicken, game, butter.

Eggs. Raw, soft-boiled, poached and scrambled.

Bread and farinaceous articles. Any quantity, if there is no special contra-indication in the way of indigestion of this class.

Vegetables. All kinds of ripe and well cooked vegetables, such as potatoes, spinach, young peas, rice.

Desserts. Egg and milk puddings, ripe fruits.

Drinks and liquids. Pure water, warm fresh milk, cream, malt preparations, claret, burgundy, port, sherry, tea.

AVOID:

Pork, weal, salt meats (except ham), hashes, stews, thin soups, cooked oysters or clams, turkey, pickles and spices, pies, pastry and preserves, thick gravies and all made dishes, and anything found by experience to disagree.

Best of all, consult your physician.

A subscriber writes:

We physicians believe that we are, in straits that could not be worse. The prevailing dishonesty over the land! Physicians are cheated right and left! The other day I was called to a man who was injured in a bank (New England National Bank), the chief officer told men to go right ahead and treat the man and it would stand good for his treatment. Now the bank is using dilatory and evasive methods and refuses to pay me. To where are we drifting? Our government is based on the ideas of a Rousseau!

EXERCISE.

Exercise is nature's greatest corrective agent.

Exercise will prolong your productive years.

Exercise will prolong your life.

Exercise is necessary for health and full vigor.

Exercise is increasingly necessary as the brain works harder, the body begins to lag, and age makes its impression.

Exercise clears away the cobwebs, eliminates the poisons, and enriches the blood.

Exercise invigorates and increases efficiency.

Exercise prevents depreciation.

Exercise brings refreshing sleep.

Exercise improves the appetite and makes life worth living.

Exercise drives away the "Blues."

Exercise postpones sickness and failure. You can postpone everything else except your Exercise.—Dr Watson L. Sanger, New York. Sympathy is a composite photograph of humor and saintliness.

Man cannot be happy through science; but to-day he can much less be happy without it.—Poincare.

The science of happiness chiefly proves that the real happiness of the individual is joined with that of society. Personal happiness is never in conflict with social happiness so long as it allows itself to be guided by the true value of the principles of life. It is the conventional conception, elaborated through the centuries, regarding wealth, envy, the pleasures or the domination of men, which makes us seek objects contrary to social prosperity. The contradictions * * * between individual and between individual and social happiness are only apparent * * * chiefly due to a superannuated education whose conventional foundations have not changed for thousands of years.—Finot.

RURAL SANITATION.

SUMMER DIETARY.

THE Federal Department of Agriculture has adopted the most laudable policy of issuing, through its office of information, circulars of a practical and suggesting nature regarding hygiene and prophylaxis; especially timely is one on keeping food in the summer, to the end that the people of the country may avoid ingestion diseases. Watchfulness is especially essential in the summer by reason of the greater tendency of food to putrefaction, the greater bacteria multiplication, and the chemical changes in some foods which greatly lessen their nutritive value and oftentimes make them unfit for consumption. Unfortunately there is no rapid, absolute, simple and practical way of detecting such deleterious conditions—at least not for the family of average means. So the eyes and the nose must be largely relied on for the detection of bad food in hot weather; next after these taste must be the guide; and finally the fingers. An unusual odor or appearance should be decisive tests. And in boarding houses or restaurants one should be especially careful about meats cooked with a highly spiced or aromatic sauce, such as might disguise a bad taste or odor. Only sweet smelling, clean food should be eaten. Spotted, green, shiny or frothy meat, or meat soft here and there, must be A mother should examine any eatable carefully in a good light, smell it and then taste of it before letting her child eat it.

Milk, always a congenial culture medium for most bacteria becomes especially dangerous in summer, more than ever should it in that season be dispensed in sealed bottles. The milkman may serve a good milk which quickly, however, becomes stale and harmful if left standing by the housewife on a hot porch or stoop before it is put in the refrigerator. And all mothers, if there is any doubt of the purity of the milk they give their little children, should use some such contrivance as the Straus Home Pasteurizer, which can be had at almost nomi-

nal cost, with full directions for its use, at any Straus Laboratory.

All foods should be handled as little as possible and kept covered, wrapped or screened (18 meshes to the inch will keep out not only flies and other insects as well); and all vessels, pitchers, etc., in which food is to be stored should first be scalded. The ice box, especially its drain pipe, should be cleansed thoroughly and frequently with boiling water and washing soda; and this domestic essential should be given an occasional airing. Uncooked food should, in general terms, be avoided; nor should children be allowed to eat the skins of fruits, especially of such that have been exposed to insects or to street dirt.

Nor is everything in a summering place or a strange city necessarily pure and wholesome. There is much danger of typhoid fever in the country; many cases of this disease that are recorded in the fall in cities have had their origin in water, or milk, or contaminated food at some summer resort. If one is not absolutely sure of the reputation of springs, wells or tap water, boiled water should be insisted on. And any water carried from a source near an out house or a stable or in a neighborhood where fever is at all prevalent should be absolutely refused. The flat taste of boiled water can be obviated by putting it in scalded shallow, open pans and allowing it to stand for twenty-four hours where neither flies nor dirt can reach it: thus will its usual taste be restored.

The circular above referred to warns one especially not to believe that the label "Guaranteed under the Food and Drugs Act" on cans and packages means that the Government has tested these foods and pronounced them pure and desirable. The Government does not make the guarantee, which latter is made wholly by the manufacturer, "and means no more than when your own corner grocer guarantees that the sugar he weighs out for you is all right.

Examine goods labeled 'guaranteed' just as

carefully as any other kind."

A judicious summer dietary would be inclusive of the following: Such easily assimilated fruits as grapes, oranges, lemons, rhubarb, peaches, cherries, berries, apples, pineapples, pears, melons (most of these have also a mildly laxative effect); clear soups; leafy or fibrous vegetables—tomato, celery, spinach, asparagus, lettuce, onions, beets; green salads—endive, chicory, romaine, watercress; fresh fish or game; roasted or broiled beef, mutton or lamb—

but once daily; soft cooked eggs; milk or buttermilk or sour milk (to which latter sugar may be added), simple desserts as of gelatine, custard and ice cream. Heat-producing foods which should either be avoided or eaten in moderation are: thick soups; canned meats; spices and condiments; nuts, beans, oils, cheese, bananas, dates, preserves, candies, sweets. Alcoholics should in general be avoided; as also overripe or unripe fruits. Water moderately at meals but up to the utmost limit of one's thirst between meals.

A SONG FOR JUNE

Our purse, my dear, is flat
(It never yet was fat),
Our garments worn and sere
(They were the same last year),
And frugally we dine
(Who never craved for wine),
Admitting that,
O! why, my dear,
Repine?
The merry world's in tune,
And fruits and flowers thrive
And robins sing, like mad:
"Ho! it is June,
And we're alive;
Be glad!"

Here are we, still together
(And richer by the weather);
There's nothing we would borrow
(O! certainly not sorrow),
But just what Heaven lends us
(This blue sky that attends us).
Why care a feather
What the morrow
Sends us?
This golden afternoon
Bees buzz about the hive
And robins sing, like mad:
"Ho! it is June,
And we're alive;
Be glad!"

Green woodland pity heals the ancient scar; Spring after spring, through still unresting years, In little saplings and the tufted pine

The old trail disappears.

Forbidden pine and fernbrake come once more;

Brown leaves have hid the secret deep and well;

Only the scattered blaze-marks, blurred and dim,

A fading message tell.

One coming here might seek for it in vain:
There is no sign above the guarded gate
To point the path, to where the still wood
keeps

Its heart inviolate.

The old path fades, forgotten; only guessed,
And scarcely found and once more lost
again.

So record serves to show the long-healed wound

Of havoc and of pain.

God send all trails forgetfulness as this!
Such healing pity of the kindly years,
That no swift-footed memory may find
Lost places of old tears!

—Arthur Ketchum, in Atlantic Monthly.

You take pretty good care to keep your bank balance on the right side. How about your physical balance. Better assure that by being examined once a year.

An ounce of precaution is worth many pounds of regret.

AN EDITOR'S VANITY.

If an editor were found to be liable under the Income Tax law, he'd be so puffed up about it that he'd begin to refer to his chilblains as gout.—Ohio State Journal.

CONTAMINATED VEGETABLES.

DR. R. H. CREEL, in Public Health Reports No 72, discusses vegetables as a possible factor in the dissemination of typhoid fever. Plants cultivated in soil thus contaminated will take up on the leaves and stems. The typhoid bacillus was recovered from the tips of leaves apparently soil-free. Nor will rainfall free vegetables from infected material. The longevity of this germ ranges in water from 7 to 30 days and in soil from 60 to 70 days. The fertilization of ground by human excreta thus assumes a two-fold importance. When pollution of garden earth with infected material occurs not only may such vegetables as lettuce, radishes and celery directly convey infection, but the soil may serve as a reservoir for the bacteria, drainage from such areas seeming to maintain an infection in streams for much longer periods than if the infection of the stream were direct.

Of all the problems confronting the sanitation of this country in recent years few have received more attention than that of stream pollution. But in the consideration of the contamination resulting from the discharge of urban sewage, which is admittedly of paramount importance, that arising from a great and widespread rural population has been given less consideration than it deserves.

The practice of using human excreta as fertilizer is by no means as uncommon as is generally supposed, and without doubt will become more widespread unless this method of soil enrichment be curtailed by properly enforced laws. Although some emphasis has been laid on the fact that tips of vegetables examined were microscopically free from earth, the viability of the Bacillus typhosus on plants, and its longevity in soil, can be considered identical so far as the sanitary significance is concerned, for very seldom if ever is there seen in the market lettuce or celery free from dirt, and even in well-managed house. holds and public eating places scrupulous care in preparing articles for the table is exceptional.

FERTILIZERS.

THE kind of fertilizer employed has a marked influence upon the character and quality of the vegetables produced. For the garden only those fertilizers that have been carefully prepared should be used. Fertilizers of organic composition, such as barnyard manure, should have passed through the fermenting stage before being used. The use of night soil generally is not to be recommended, as its application, unless properly treated for the destruction of disease germs, may prove dangerous to health.

BARNYARD MANURE.

For garden crops there is no fertilizer that will compare with good, well-rotted barnyard manure. In localities where a supply of such manure can not be secured it will be necessary to depend upon commercial fertilizers, but the results are rarely so satisfactory. In selecting manure for the garden, care should be taken that it does not contain any element that will be injurious to the soil. An ecess of sawdust or shavings used as bedding will have a tendency to produce sourness in the soil. Chicken, pigeon, and sheep manures rank high as fertilizers, their value being somewhat greater than ordinary barnyard manures, and almost as great as some of the lower grades of commercial fer-The manure from fowls is especially adapted for dropping in the hills or rows of plants.

COMMERCIAL FERTILIZERS.

Commercial fertilizers are sold under a guaranteed analysis, and generally at a price consistent with their fertilizing value. No definite rule can be given for the kind or quantity of fertilizer to be applied, as this varies with the crop and the land. At first the only safe procedure is to use a good high-grade fertilizer at the rate of from 1,000 to 2,000 pounds to the acre and note the results. Market gardeners frequently apply as much as 2,500 pounds of high-grade fertilizer per acre each year.—Farmer's Bull. 255, U. S. Dept., April.

ODD JOBS.

In the thirteenth Census are entered some occupations entered with but a single name, among our nearly one hundred millions of people. Machinists come under a single heading; but each machinist is subclassed according to the particular work he is doing, and so with all other manner of industries. For instance, in the shoe trade there are judgers, fakers, plowers, sluggers, busters-out, cripple-chasers and pancake makers. Then there is the "whittler" and the "pouncer" in a hat factory: "tobles" is a maker of stogies; a "dock-walloper" is a sort of longshoreman; a "vibrator" works in a clock factory; a "tonger" has to do with oysters; a "teaser" works in a glass factory.

Some "excuses for living" are odd enough. There is a "snake merchant" who has for seven years and more past run a snake ranch in Texas; and he seems to have got along without competition. In 1910 he sold over 150,000 rattlers and black snakes, to zoological gardens, circus side-shows, medical colleges and biological students; evidently this creepy business pays, for the snakes sell from a quarter of a dollar to two dollars each.

Another citizen in a class all by himself, in Kansas City, bottles the smoke of hickory logs, claiming that when this is let loose in an airtight compartment where meat has been hung, it will produce the same results upon the meat as though it had been smoked in an old-fashioned smoke house.

There is a man out Seattle-way whose business it is to secure the moustaches from walruses killed in Bering Strait. These stout bristles are plucked from the nose of the walrus by Indians, tied into small bundles and sold by the enterprising Seattleite, who made one thousand dollars by this traffic in 1911 to agents on the Pacific Coast; the agents ship them to China, where they are in great demand as toothpicks, In an aged bull walrus the bristles are about a foot long; and nearly as thick as a lead

pencil tapering to one end, of course; they are tough and when made into picks can be pushed between teeth without injury to the enamel.

Another man is a tobacco blender for individual smokers. Every fresh customer is asked for a sample of the tobacco he has been using, and for any criticism he had to make regarding it. These facts are entered on a card index; and the blender experiments until he obtains a blend that exactly suits. On his counter, in full public view, is a druggist's hair balance scale, on which are weighed the various brands used in making the blend; as soon as the customer is satisfied the formula is numbered and entered in a "customer's blend book," and the customer is given a card, as: "The number of Mr. Blank's blend in 638; order further supplies by this number." Later this enterprising tobacconist had made a supply of air-tight cartons labeled "my mixture," underneath a blank line for the customer's name.

Who would think of a woman filling the position of a "goat"? This is an occupation almost as pathetic as that of "Nelly the Cloak Model." It is the business of the "goat" to be discharged several times every day from department stores; but unlike many others, she never has any trouble coming back. When a customer with a grouch on complains of discourtesy or inattention a "goat" is summoned, as the person responsible for the department under discipline; she is then given a sound rating before the irate customer; then she weeps copiously, is nevertheless summarily dismissed, to the complete satisfaction of the customer.

Some women raise Persian cats and sell them for from twenty-five to one hundred dollars each, to wealthy cat fanciers; women get incomes of seven hundred a year from pigeon raising. To have dominion over a home satisfies most women; but not all; for there are not a few women desirous of increasing their sphere of usefulness and of authority who have become policemen.

As a general proposition, any one who has a business which he does not share with anyone else, is pretty certain of a living, at least.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

Leisure Hour was pounded in the belief that the physician is but human; that he lowes the beautipul in thought and sentiment as expressed in literature, and that he is at times surprived with technical matter. Short, crisp contributions on any of the subjects named in the sub-heading are invited to this department.

THE CONQUEST OF OLD AGE.

By LEON PATRICK, M.D., Los Angeles, Cal.

A sensual and intemperate youth hands over a worn out body to old age.—Cicero.

In all periods of the world's history, mankind has been personally interested in the game of death-dodging; and the suggestions offered to assure longevity are legion in number. Classic mythology is rich in allusions to fountains in which he who bathed cast off his years as a worn garment and walked, clad in the beauty of his youthful days. The Old Testament promised length of days to those who observed the law. The ancient alchemists spent their nights in the dual search for the power of transmutation that would turn all base metals into gold, and the elixir of perpetual youth. Alcohol was first made known to humanity by a seeker after the immortalizing fluid, and tradition is to the effect that he got hideously drunk in con-Queen Elizabeth of England proclaimed that she would enrich and ennoble the first who brought her a small vial of the rejuvenating elixir. Less than twenty years ago Brown-Sequard, the eminent American physiologist of French birth, laid great stress on the efficiency of emulsions made from certain body organs which injected into old men would bring back their vigor. While the liberal use of rouge, powder and dyes that are so much in evidence to-day, is a pathetic though often amusing proof of the desire to hide the prodromes of senility and appear young. However futile all these attempts have been or are, they well illustrate the struggle of mankind to evade the inevitable results of natural law.

The whole trouble is this: we want the pretense of a thing rather than the thing itself. Sooner than pay the price of health and enjoy its reward of long life, the majority want to have their own sweet way about everything, which ends in a short life and a sad one, which is even worse than a short life of a merry one.

We all have a penchant for the pleasures of life and a laudable desire to prolong our term of years on this merry-goround we call the earth. Yet in seeking length of years it is obvious that there is no purpose to prolong the misery which is invariably associated with the senile state, but to so develop the organism through correct living and prevention of disease that one may pass over a long period of life in active and vigorous health—to be terminated, not by pain, suffering and sorrow but by a natural death—sleep.

Very few men, or women if you please, die of old age. The great majority die because a part gives way from misuse or abuse. In fact, Methuselah was the only individual whose life has not been "nipped in the bud" by the frosts of indiscretion. But thanks to the advancement of personal and public hygiene the average duration of human life is steadily on the increase. If we take the life tables for different periods of England, France, Prussia, Denmark, Sweden and Massachusetts, we find that human life lengthened during the seventeenth and eighteenth centuries at the rate of four years per century: that during the

first three-quarters of the nineteenth century it lengthened at the rate of about nine years per century; that at present it is lengthening throughout Europe at the rate of seventeen years per century, and in Prussia (the supposed home of preventive medicine) at the rate of twenty-seven years per century, while in this country life is lengthening at about fourteen years per century. So it is quite probable that we may yet attain a general prolongation of life the world over that will greatly exceed the Biblical tenure of three-score years and ten.

Nothing is more indicative of such longevity than the great strides in medical discovery, together with the cumulative influence of hygiene. For instance, in India, where medical progress is nearly unknown, the average duration of life is less than twenty-four years and remains about sta-Ours is forty-five. That is to tionary. say, disease does not get an Indian until he is twenty-four, an American until he is Our knowledge of hygiene forty-five. makes the difference. Reduced to mathematical formula the equation reads thus: 24 plus hygiene equals 45. By the same reasoning, 24 plus more hygiene equals 50, 60, 70 or whatever you will. The numerous examples of longevity among the Bulgarians, many of whom are spry and active at 150 years, show that old age is after all a relative term and that a centenarian may be as young and useful as another man at fifty, just as an American at eighty may be no older, physiologically, than the West Indian at forty.

Certain it is—and this you know if not waiting to hire a hearse—that with our present knowledge we should all score our century and over with ease, but to do so it is essential that we keep every vital organ in constant working order and cultivate a hopeful, cheerful and busy men-

tality.

Regarding the physical phenomena which accompany, and are the cause of, what we call "growing old" there are various opinions. Yet the best authorities on longevity are agreed that this aging process is materially hastened or retarded by the manner of life and the daily habits of the individual. And right here I wish to remind you that the proper time to lay the foundation for a wholesome happy old age is in youth.

We all know that vital force squandered in early life can never be regained. Yet the indifference with which we permit, and often assist, our youthful progeny to dissipate their physical and mental vitality is surely criminal, if not homicidal. Both in the home and at school the influences are such as overstimulate and tend to force the development of body and brain, than which there is nothing more conducive to an early advent of old age.

Nature operates in a certain way, yesterday, to-day and forever. And when mere man attempts to force the development of any plant or animal life he invariably subtracts from its power to live. Nowhere is the philosophy of this assertion more forcefully illustrated than in the

training of the human plant.

The tendency of the present day regime is to shorten the period of development and increase the mental and physical capacities, pass over the period of maturity with reckless indifference, and endeavor to lengthen the period of decline. We ignore the mode of living of those who lead a natural life terminating in a natural death. We all want to live long, yet we adopt the mode of life which hastens maturity in the young and decay in the old.

In plain, blunt words, forced development always shortens life. In our homes children are fed beyond their digestive capacity—their physical needs are overestimated. In our schools children are urged to learn more and faster than they should, the curriculum is constantly being enlarged necessitating mental exertion much beyond their youthful capacity and as a consequence the mental faculties become weak or perverted. Add to this the enervation that comes from a lack of needed rest and you have a composite of physical disorders that invite an early death.

Reconstruction and repair occur most rapidly during sleep. Mental and physical activities being most marked during the period of development, a correspondingly large portion of time should be devoted to recreation and rest. But owing to the stress and hurry of present-day life what little rest we get is not commensurate with the work which necessitates it; while the recreation we coerce ourselves to take is so intensified that it becomes exhausting Instead of a ramble through the woods which would soothe and calm the tense nerves, school children are compelled to do penance in an illy ventilated gymnasium or coaxed to take up competitive athletics which unduly tax the heart.

Cramming the growing mind to its full capacity, and forcing the physical activi-

ties to their utmost, do not conduce to a sound mind or a sound body. All subjects requiring strenuous study should not be taken up until after puberty. The reasoning faculties should be exercised cautiously and naturally while maturing. The physical development should also be gradual and general. Especially should there be no violent exercise on the part of unseasoned and untrained youngsters.

Instead of trying to shorten the period of development we ought to do all in our power to lengthen it. Fatigue, both mental and physical, should be avoided. When tasks begin to cause strain, they should be set aside for recreation. There should be more frequent recreation periods in school and longer hours for sleep at home.

Insufficient sleep causes insufficient reconstruction and the body does not develop to the full extent. And sleep, be it known, should be regulated by the individual's requirements, and not by the clock, while recreation should be re-creation—an actual diversion. We could all increase our capacity for work and add yours to our life by a little more play each day.

The average man lives too fast. He crowds into twenty-four hours the work of a week. He demands of his brain more than it can do. He eats and drinks too much. He is irrational in his recreations, and self-indulgent sexually. Most of all he does not stop to consider the effects of his strenuous activities—he will not acknowledge that he is injuring himself. Only when his excesses have gone so far as to bring on some diseased condition involving disability or pain, does he realize that he is headed for oblivion on the high-speed clutch.

So it is during the youthful or active period of life that the processes of degeneration really begin, which, imperceptible at first, gradually enervate and destroy vitality until senility supplants youthful vigor at the early age of forty-five. But all this premature decline of the human organism is avoidable—and avoided it must be if each succeeding generation is to get out of life more than its predecessor.

Since there is no single rule or remedy that alone will assure longevity it must be acquired by an early, careful and constant study of all those laws of health which maintain in proper balance the vital processes of waste and repair. So long as the

reconstruction process keeps up with, or exceeds, the destructive process, the integrity of the organism is maintained; but just as soon as this balance is lost a rapid decline of the vital powers ensues.

Nothing lowers the vital resistance more than excesses. Length of days comes as a natural sequence of a life of moderation. That word is, indeed, the keynote of longevity. First, moderation in eating. As previously stated, people eat too much and drink too much. Eating has become a habit with almost every one. It is like taking morphine—and the more you take the more you want. Beware of overstimulation from foods, or drinks; for in producing that feeling of exhilaration they must necessarily shorten life and lessen man's capacity for real enjoyment. there is any excuse for even the most moderate use of alcohol in any of its various forms it has escaped my observation entirely. As for tea and coffee they can not be taken strong or in large or long-continued quantities without predisposing old

After forty-five to fifty-five years of age a life of celibacy is to be advised. It assures better health and incidentally greater endurance for men as well as women.

While overwork and deprivation shorten life, judicious physical exertion accompanied by physiological rest is sure to prolong our term of years. Moreover, brain work is just as necessary as physical activity and the man who studies his own case and then plays one kind of work against the other, finds continual joy and zest in life and his days shall be long upon the land

Above all, avoid the unnatural, precocious development of youth—take some thought for the future. Keep regular hours. Sleep with windows wide open and at least eight hours out of the twenty-four. Dress sensibly. Enjoy both your work and your pleasure. Avoid emotional extremes; likewise vitiated air and overheated rooms as you would poison, for they rob you of vitality. Live as much as possible in the open of God's out-of-doors. And don't be afraid of the sunshine. If often brings health when all else fails. Never fool with doctors, and don't go into a drug store except to buy a tooth-brush or to consult the directory—do but these things and you may rest assured that you will die young in heart and hope no matter how long yo: live.

FROM OPENING OF THIBET.

By Percival Landon.

It is an austere country into which we are now moving. The lake is a mile long and perhaps 600 yards in width; nearly all the year round it is frozen, though in the bitterest days of midwinter, when the thermometer is nightly going down to 5 or 10 degrees below zero, there is always on the southern side of the lake an unfrozen pool. The cliffs sweep down into the basin, bare To the east, whither our and unlovely. road still is to run, the nakedness of a steep ascent of wearisome boulders is barely hidden by the stunted rhododendron growth. At Changu there is now a comfortable bungalow, and only those in dire necessity will fail to stay the night. The hardest work of all the road to Lhasa lies before us on the morrow; and though I have more than once passed through from Chumbi without a halt, there is no doubt that the exertion can only be justified by real urgency. Leaving Changu in the morning, the traveler, considering the very short way he knows he has to go, will demur at the earliness of his start. But there will be no mercy shown him. He will be allowed perhaps, to ride for 500 yards; after that he will prefer to trust to his own feet until all except the last three miles of the stage have been covered. Climbing over these boulder-strewn surfaces would be bad at the sea-level; here, where air is so thin, it soon becomes a burden to pull one's solid body over the heartless obstacles. If the descent be at all steep, the newcomer will sit down every twenty or thirty yards. His muscles are not tired, and he regains his strength in a surprisingly short time; but at the moment he sinks upon some friendly stone he thinks that another step forward will be his last There is a peculiarity which it is impossible to describe to those who have never been more than a thousand feet or so above sealevel. The lungs seem foolishly inadequate to the task imposed upon them; the pluckiness of one's own heart is an unmistakable, but

somewhat terrifying, symptom, for it goes on beating with increasing strokes till it shakes the walls of the body; and not the written testimony of the leading heart expert in London will convince you that it is not on the point of bursting its envelope. Then you may be thankful indeed if you escape mountain sickness. If that should come upon you your bitterest enemy will lead your horse for you. I have seen cases of mountain sickness in which amazement overwhelmed one's sympathy. I have seen men in such a state, that they seem to have every symptom of habitual drunkenness; all the limbs shiver, and in the bloodless face the eyes have that extraordinary look of insanity which is, I think, caused by an inability to focus them. The speech comes with difficulty, and in one case that I saw the mental coherence was as obviously at fault as the physical. But strange though the appearance is to the outsider, for the sufferer himself I do not suppose that there can well be condensed into three or four hours such an agony of aching. The brain seems cleft in two, and the wedge, all blunt and splintery, is hammered into it as by mallet strokes at every pulsation of the heart. Partial relief is secured by a violent fit of sickness (which, however, is not always forthcoming); and through all this you have still to go on, to go on, to go on.

Here, too, the wind exacts its toll, and drives a cold, aching shaft into your liver. This is no slight matter, for the toil of climbing is excessive, and the exertion of covering half a mile will drench a man with perspiration. He then sits down, and this strong wind plays upon him to his own enjoyment, and to the destruction of his lungs.*

Up one still goes till the lake lies a mile behind one, still untouched by the first rays of the dawn. Often a steep descent as

^{*}Pneumonia caused more deaths than any other disease.

treacherous to the foot as the ascent, has to be made. One of the most tedious and tiresome things about this track is the wearisome necessity, which awaits you around every corner, of losing at a stroke two-thirds of the advantage you have just won by an hour's hard work. It appeals to the mind, and shortens the temper at a time when any friction in the human microcosm is waste of strength. One resents the man who first pointed out the track. One is inclined to think, that had one only a few hours more, one could find a far more economical path than that by which one is obliged to go. This, a very common failing, as I have noticed myself, perhaps indicates that one's common sense also is a little affected in these high altitudes. Two miles from Changu is the only level portion of the day's march. One goes across the little plain, and makes for exactly the one point which a stranger would decide to be the most impossible in all the amphitheater.

The Sebu La is beyond question the most difficult point of all the road from Siliguri to the end, a sheer wall of precipitous rock, springing up from the level plain. On looking closely one can see some symptoms of a zigzagging road climbing upward, and by those zigzags you have to go, for the rock

allows no other path. This is the most heart-breaking climb of all the day. You may, perhaps, here overtake the slow, painful tramp of the coolies sent on, even before your own rising, from the last stage; pack animals are impossible on a road like this. The strange thick-calves, patient men, carrying burdens which no Englishman would shoulder, move steadily onward over their six-mile stage.

The weight that those Central Asian coolies can carry is astounding; the ordinary load is from 80 to 100 pounds, nearly double a man's pack on the level plain of India. But these Bhutias, when paid by the job, do not hesitate to double, even treble the load. I have myself seen a man carry into camp three telegraph poles on his back, each weighing a trifle under 90 pounds. Further east the tea-porters of Se-chuan are notorious; and loads of 350 pounds are not unknown. Setting aside the story of a Bhutia lady who carried a piano on her head up to Darjeeling from the plains is too well known to be likely to be exact, the record seems to be held by a certain Chinese coolie who undertook, in his own time, to transport a certain casting, needed for heavy machinery, inland to its owner. The casting weighed 570 pounds, and the carriage was slowly but successfully accomplished. An English bricklayer is forbidden by the rules of his union to carry more than 14 pounds.

Between the ranks of thistle, down the road,
The phantom flocks of sunbeams hastily,
With gilded feathers of the butterfly,
Disperse away; anon a weary load
Of grain, wild scented, being freshly
mowed,
Comes smoking on; as from the brooding

sky
There fall deliberate, still showers of shy,

Big raindrops all around. The teamsters

The swaying oxen, steaming, to a shed For covering. The brown and dusty trees

Are whispering, as eagerly they spread Their branches in the rain, and stand at ease,

And listen, yonder in the clover bed
The happy buzzing of ten thousand bees!
—The late Charles Warren Stoddard in the
San Francisco Monitor.

A little sun, a little rain,
A soft wind blowing from the west,
And woods and fields are sweet again,
And warmth within the mountain's breast.
—Stopford A. Brooke.

The heart two chambers hath
Of joy and sorrow,
The heart two songs doth sing
Today—tomorrow.
The heart two things doth weep
And weeps them ever,
Love that is gone, and love
That cometh never.

—Goethe

Pompous Lady—"Must I stick this stamp on myself?"

Post Office Clerk—"Well, you can if you like, but it's intended to be stuck on the letter."

THE ETHNICS OF INFECTION.

DR. M. H. Foster, Past Assistant Surgeon in the United States Public Health and Marine Service, has predicted the practical extinction, within one or two generations, of the Alaskan Indians, by reason of tuberculosis. Dr. C. P. Hutton, an army surgeon, several years ago reported from Alaska his belief that no other country in the world could show such a percentage of tuberculous natives; "they are everywhere dying of tuberculosis." Such statements might well startle one unacquainted with the history of peoples attacked by an infection which they have hitherto never experienced, and which has been introduced among them by strangers to them-by those not indigenous to their soil, and having no ethnic affiliation with them.

Mr. John Guille Millais, the illustrious son of the great painter has in his book "Newfoundland and its Untrodden Ways," most generously esteemed the Mimacs, those Indians who heretofore have been a most virile tribe: as guides their endurance has been untiring; as canoe men, and in their wilderness contention with elemental environment, they are wonderfully skillful and masterful. But "consumption and the trader's rum are playing havoc with this fine race. In one drunken spree they often waste the earnings of a month of toil. The law forbids the sale of liquor to them; but in the far off outposts the law is a dead letter."

Dr. Grenfell, whose "parish" includes as much of Labrador as he can circumvent, has observed that epidemic diseases have up to recent years been practically unknown along the Labrador coast; "it is a good place for the study of incubation periods." The infections which the natives have contracted have been introduced mostly from regions to the south. In one little Labrador settlement, which was for the first time in its history visited by typhoid fever, Dr. Grenfell when he arrived upon his healing mission, found eighty frozen bodies of those who had speedily succumbed to it. Diph-

theria and the exanthemata are much more fatal among the Labradoreans than among us; they have not yet become inured to these diseases of civilization. Especially is tuberculosis fatal, despite that one factor in the cure—fresh, cold air—is ideally circumambient; the Captain of the Men of Death seems to have been unknown until a patient, a stranger coming up from Halifax, introduced him.

Measles is an exanthem comparatively innocuous in civilization; we have long been accustomed to it. But this infection was entirely unknown in the Fiji Islands until some benevolently minded whites introduced it. Thereupon, in a single epidemic 40,000 among 150,000 Fijians—men, women and children, the aged and the young alike—died most miserably of measles. A like epidemic of the same infection visited the Faroes in 1846; of the 7,782 inhabitants of these Islands 6,000 were attacked.

It is the natural history of any infection that it acquires an unwonted malignity when for the first time it invades a race hitherto unacquainted with it. The Pacific Islanders have been like the negro and the Indian, in that consumption was unknown among them until the blessed advent of their white brothers, so eager to assume the "White Man's Burden"-with the sure and substantial fruition of such service. How, oftentimes, since the Carribeans (the name of whom alone is left) has benevolent assimilation spelled pitiless extermination. The negro in his native Ethiopia knew nothing of consumption-nor of syphilis nor alcoholism, nor cocainism either-until the Caucasian came to bestow upon him certain pre-arranged blessings of civilization; now every other adult negro in these United States is dying of tuberculosis, to which those other diseases predispose.

The same dreary story must be related of the American Indians, whenever and wherever we have come among them, with our tubercle bacillus and our fire water that drink "with the venom of the serpent and the tongue of a woman"—agencies that are fast, and as surely as the moon changes and the tides rise, bringing about the dusk of that once mighty race of men. The Bureau of the Census in Washington tells us that the Indian is dying of tuberculosis in greater numbers than the negro and in far greater numbers than the whites.

This phenomenon of susceptibility to infection on the part of people first experiencing them is emphasized by the contrasting fact that experience of an infection through many generations renders a race comparatively immune to it. The negro suffers but little from yellow fever and malaria; whilst the Jewish people, during

the forty centuries of their existence, have established for themselves a racial immunity to tuberculosis. Such immunity is of course only comparative; Jewish people do become consumptive, yet probably not so frequently as other peoples; they are said to be of all peoples, except perhaps the Quakers, least prone to tuberculosis.

Ethnic susceptibility to infection is a matter well worthy consideration by those who contemplate spreading the blessings of civilization among peoples assumed to be savage and inferior. The white altruist in his explorations of "benighted" regions is much too often accompanied by agencies most cruelly destructive of oftentimes superb peoples.

THE UPLIFT MOVEMENT

A fat, bald man knocked loud. Sez he, "Please, madam, I am tryin'
T' learn if you attend some church?"
"I do! Me name is Ryan!"

A faded woman came th' next, "Are you a mother, ma'am? Statistics I'm collatin' here!" Sez I, "Seven times I am!"

(Poor thing! her man can't live with her!
'Tis said she drove him wild
With nerves an' cats an' fussiness!
She has not chick nor child!)

As I was busy at th' stove,
A pale, thin girl walked in.
"I seek health topic notes! No doubt
You're careless? Cook in tin?

"Food values—do you know them all?
That stew smells good though! Yes!"
(I felt ashamed my Willie saw
Her thin, tight, low-neck dress!)

When I was tellin' Tim at night, He laffed; then smoked a bit. "They've got to earn their livin', Mag! Don't be preventin' it!

"They put us in their little books,
Our eats, baths, what we do!
But, girl, what keeps them on their jobs?
Th' likes o' me an' you!"
—Ella A. Fanning.

THE BACTERIOLOGIC BALL.

A gay Bacillus, to gain him glory, Once gave a ball in a laboratory. The fête took place on a cover-glass, Where vulgar germs could not harass. None but the cultured were invited (For microbe cliques are well united), And tightly closed were the ballroom doors, To all the germs containing spores.

The Staphylococci first arrived—
To stand in groups they all contrived;
The Streptococci took great pains
To seat themselves in graceful chains.
While somewhat late, and two by two,
The Diplococci came in view.
The Pneumococci, stern and haughty,
Declared the Gonococci naughty,
And would not care to stay at all
If they were present at the ball.

The ball began, and mirth ran high With not one thought of danger nigh. Each germ enjoyed himself that night With never a fear of the Phagocyte. 'Twas getting late, and some were "loaded" When a jar of formaldehyd exploded, And drenched the happy dancing mass That swarmed the fatal cover-glass.

Not one survived, but perished all
At this bacteriologic ball.

—Journal Tennessee State Med. Assn.

BOOK NOTICES.

PRACTICAL THERAPEUTICS, Including Materia Medica and Prescription Writing, with a Description of the Most important New and Non-official Remedies Passed Upon by the Council on Pharmacy and Chemistry of the American Medical Association, by Daniel M. Hoyt, M.D., Formerly Instructor in Therapeutics, University of Pennsylvania, Fellow of the College of Physicians, Chicago. Second Edition. Revised and Rewritten. St. Louis, C. V. Mosby Co., 1914. Price \$5.00.

This is a book for doctors and it is a good book, too. The arrangement is admirable. At a glance the practitioner can get the drug, its physiological action, its toxicology and treatment, its therapeutic indication and contraindication. A most valuable part of the work is the description of all new and non-official drugs that have been passed upon by the Council of Pharmacy of the American Medical Association. One finds also the combination and value of most proprietary remedies. There is a valuable therapeutic index—an essential to such a work. The publisher's claim seems fairly justified that Hoyt's book is an Encyclopedia Britannica on Materia Medica and Therapeutics.

PATHFINDERS OF PHYSIOLOGY, by J. H. Dempster, A. B., M. D., Editor of the Detroit Medical Journal. Illustrated. \$1.00.

This charming booklet is the result of Dr. Dempster's indulgence in biography as a recreation. Harvey Beaumont, Bernard and many another pioneer are interestingly written up.

TREATMENT OF CHRONIC LEG ULCERS, A PRACTICAL GUIDE TO ITS SYMPTOMATOLOGY, DIAGNOSIS AND TREATMENT, by Dr. Edward Adams, 122 Pages, Cloth \$1.00. Published by The International Journal of Surgery Company, 100 William Street, New York City.

THERE is no lesion the successful treatment of which will so greatly enhance the young physician's reputation as that of leg ulcer. Dr. Adams' well-illustrated little book explains how "the stunt" can be done. Nurses would also find this booklet useful.

HEALTH THROUGH DIET. A Practical Guide to the Uric-Acid-Free Diet., by Kenneth S. Haig, L. R. C. P., London., M. R. C. S. Eng. With the Assistance of Alexander Haig, M. O., M. D., Oxon., Phila. J. B. Lippincott Co., London, Methuen & Co. 1914. \$1.25 Net.

This is a practical book, useful alike to the doctor, the nurse and the layman, founded on the author's personal experiences as a physician of eighteen years, on that of his eminent father and on questions usually asked by patients regarding diet. The subject is indeed most important. "Tell me what you eat and I'll tell you the kind of man you are," observed a really wise man. Again it has been well said that it was really the dyspepsia-breeding frying pan which brought on the Civil War. And no doubt many a divorce, or at least separation, has come about through villainous The subject of an culinary arrangements. ill-chosen diet and of its evil effects on individuals, families and communities has never been sufficiently appreciated. Haig's book will help to set such matters right.

IRRITABILITY, A PHYSIOLOGICAL ANALYSIS
OF THE GENERAL EFFECT OF STIMULI
IN LIVING SUBSTANCE. By Max Verworn, M. D., Ph. D., Professor at Bonn
Physiological Institute. Octavo. 264
Pages. Diagrams and Illustrations.
Price \$3.50 net; Postage 20 cents extra.

IRRITABILITY is a problem of fundamental physiological importance. Could we comprehend the essential nature of the irritability of living substance we could fathom the nature of life itself. Professor Verworn's great work, therefore, open up a path to the investigation of life; one finds here such information as the analysis of irritability and of the effect of stimuli can give use of the mechanism of processes in living substance. Verworn begins with a detailed consideration of the origin of the conception of the nature of irritability and proceeds to a thorough treatment of the nature and quality of stimulation, the conception of specific irritability and the effects of stimulation.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M. D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

TENDING THE HUMAN PLANT.

Just as a plant which in time of drought droops and fails, although ordinarily well able to grow and prosper, requires the gardener's hose intelligently applied to keep it from withering, just as a young sapling bent by the winds or by some abnormal defect can be made to grow straight and strong by propping it up until it grows stronger, just as certain soils require fertilizers, so does the human plant require the specific aids its defects demand—NATHAN ROSEWATER, M.D., in Cleveland Med. Journal.

THIS is the season when we all delight ourselves in the pleasures of the garden, happy if we possess a bit of land that we can call our own, for one summer at least, and that we can make to bloom and bear fruit for our own gratification. Perhaps we have a strong liking for the wilderness, where Nature asserts herself without competition from the hand of man, where all things grow in response to natural influences and environment, producing a fauna and flora upon which time as we reckon it has wrought few changes. But however we may delight in the primeval gardens that Nature has left for our enjoyment on the slopes of rugged mountains and in the wildest regions to which we have access, we always return with pleasure and surprise to the farms and parks where the hand of man has helped Nature to produce flowers and crops quite out of keeping with the natural environment. The smallest kitchen garden is made up of contributions from other continents across the seas. Man has exiled them from their first home and has made them at home again by adapting soils, shade and moisture to their needs; he has created a new environment in a foreign land; he has naturalized the strangers in the only sure way. The success of the gardener in cultivating exotics is little short of the miracu-

All things appear to be possible to a Burbank.

In these eugenic days many people are

trying to influence humanity in the interests of a wise conservation of the best human stock. Their aim is commendable even if their methods are not always wise. Their work is largely educational and is bound to develop as every great educational movement does. Now is the time when we need a wide dissemination of sound ideas concerning the human body, mind and soul, in order that we may know what human qualities are of most value to the race and how those qualities may best be conserved. Perhaps a new profession, or "specialty" will develop in time—the occupation of Human Husbandry. If so, all that we know to-day about the health of the human being, about his diseases and their successful management, will form the basis of this new science. The best experts in the real work of human husbandry now are the physicians and their assistants, the nurses. Others will have to come to them to learn what they most need to know.

As we enjoy the privileges of some pleasant garden this summer and admire the results of the gardener's art, we ought to take pride in the thought that we are engaged in the more difficult and momentous work of husbanding the human race. The sanitarian studies the environment of man and the various artifices by which it may be made congenial. The physician studies man's enemies and the diseases which they cause; he uses his art for the prevention of disease, keeping the human plant green and vigorous through life. The surgeon prunes and trims the human plant; he even grafts it in order to keep its efficiency up to the mark. The nurse makes human development and reclamation easier and more complete by tending the plant in its times of greatest need. All these workers join hands with the great mass of educators who look especially on the intellectual and spiritual needs of humanity and help the weak and foolish to survive by imparting to them knowledge and incentives.

The garden is big and bewildering and marred by many unsightly patches where work is sadly needed. The workers give too much attention to the more showy human plants which exist mainly to be looked at, and they neglect the plain-looking varieties which often possess more commercial value. This is a reproach to human husbandry which we are striving to remove. We shall have to give attention to everything that grows in this garden, and not to a few special crops in which we happen to be interested.

Does this view of your work seem too figurative—too much like a parable? Then stop, and recall some of the flowers of humanity that you have had the privilege

of enjoying—flowers that perhaps you have by your own toil and skill prevented from fading and withering before their time. The picture becomes very real again. You are actually a worker in this garden, taking a very vital interest in the health of your plants, sacrificing your own affairs, if need be, or else waiting for the bell to ring and relieve you at the end of another day's grind.

If you are sometimes tempted to think your work is too laborious and not worth while, remember the words of Dr. Clement Dukes: "I have no hesitation in saying, from a wide experience, that a due amount of care has never yet been bestowed upon the young human being."

SUNSHINE AND ANIMAL LIFE.

We think of the sun as the source not only of light but of life on this earth. The fierce heat of summer often reminds us of the other fact that the sun may strike us down if we are not prepared to withstand the power of his rays. Many deaths are directly attributed to the sun's rays. In fact, as Professor Aron, of the University of the Philippines, has observed, man is able to live in the Tropics only by avoiding such injurious factors as direct sunshine or learning to protect himself when exposed.

Aron proves his assertion by a number of very interesting observations on tropical monkeys. These animals quickly succumb to the direct rays of the sun unless their bodies are constantly cooled by a breeze or by artificial currents of air. It is quite evident that the monkey would be unable to endure the tropical heat if it were not for his habit of living constantly in the shade of the trees.

This lesson ought to have been learned by the human race before this age, but there are still to be found people who will risk themselves in the fiercest sunshine with no protection, until they collapse and have to be cooled off by their excited friends, or, more often by the internes of the nearest hospital. People should not be averse to carrying an umbrella in the sunshine if they cannot enjoy any better shade. Better an umbrella than the hospital bath tub.

Professor Aron has made another observation which he reports with the facts quoted above in the Berliner Klinische Wochenschrift. He finds that prolonged sweating with profuse evaporation of water from the skin is liable to cause fatal collapse, similar to that in cholera.

Hard work or exercise in sunlight therefore has a double peril for one who is careless of ordinary precautions—depletion of body fluids and direct heating action of the sun's rays.

BEWARE THE DRY SHAMPOO.

DRY cleaning seems to be the order of the day, even to the "dry shampoo" of the hair. For some time there was a suspicion that this kind of treatment was not perfectly harmless because the barbers in France had noted that their customers were often uneasy and sometimes decidedly ill while receiving their shampoo. The Journal of the American Medical Association has reported

several fatal cases of poisoning from this treatment. The following case is worth repeating here for the sake of the details given. The scene is in France:

A woman aged 30, on returning home after a trip, wished to clean her hair by the so-called dry method. She went into her dressing-room, which was rather small and was heated by a radiator which raised the

temperature rapidly. After pouring into a basin about two-thirds of the shampoo liquid, she leaned over in order that her hair might fall into the basin. Swiftly overcome by the fumes, she fell backward and lay unconscious for ten minutes, when the maid happened to come in. The patient was put to bed and did not regain consciousness until three hours later, during two of which she presented continuous nervous crises with cries and uncontrollable movements which frightened the family. At this time Dr. Levassort saw her. She was colorless, had an intense headache, suffered

nausea and was in a state of hebetude. This continued several days, and for three or four weeks the patient remained in an indescribable condition with mucous pallor and general anemia.

This shampoo fluid is composed principally of carbon tetrachlorid which is in itself dangerous to inhale and has a record of causing several deaths. The case against the dry shampoo is made still worse by the fact that crude material is used rather than the pure drug, in preparing the shampoo; some of the impurities thus introduced add very much to the poisonous effects of the liquid.

THE EXTERMINATION OF FLEAS

DAVID HARUM showed himself a true philosopher when he said:

"They say a reasonable amount o' fleas is good fer a dog—keeps him from broodin' over bein' a dog, mebbe."

David fails to state what constitutes a "reasonable amount" for a dog. So far as our own race is concerned we are quite sure that one flea is an unreasonable number, since the flea is convicted of taking a prominent part in the dissemination of plague and possibly other infections, to say nothing of the plain torture that he is expert in causing. We have gathered a few ideas on the destruction of fleas which some of our readers may prize highly if they should chance to run into a colony of these villainous insects, as we have occasionally done.

From India comes the glad news that exposure to direct sunlight kills fleas in a very few minutes, if they have no chance to take refuge in vegetation or other dense shade. Sand forms the best surface on which to expose garments and bedding infected with fleas. The surface of the sand should have a temperature of 120 degrees Fahrenheit before spreading the clothing for disinfecting. If the garments are turned occasionally, the holocaust will be complete in an hour of sunshine. So says Capt. Cunningham, an Indian army surgeon. He also reports that naphthalin is efficient but too slow, requiring from six to nine hours to kill fleas in travelers' baggage.

As to other chemical agents, we find the following excellent conclusions presented by Mitzman, in *Public Health Reports*, July 29, 1910:

Water, glycerine, alcohol, formalin, phenol, mercuric chloride and trikresol in the strengths used as disinfectants are of little value in killing fleas.

Sulphur as a powder also proved of no

Kerosene and miscible oil are extremely efficient as flea destroyers.

The fumigants—bisulphide of carbon and sulphur dioxide (obtained by burning sulphur)—are highly efficient in strengths employed for flea destruction.

A nurse, writing to the Nursing Times, gives this experience:

I see a doctor recommends pyrethrum roseum, and I may say I have been using this powder for five years, and, after having tried numbers of things before in vain, I found this a most wonderful stupefier, and that if it be sprinkled on clothes the fleas rarely attack one. It also has quite a pleasant smell. So now my nerves (and my skin) are not tortured as they were before, nor my life made a burden to me, and I can thoroughly recommend pyrethrum to all who are troubled with these terrible little pests.

Another nurse, who sometimes brings them home with her, says:

I work in a very rough district, and am often obliged to change all my clothes immediately on my return home before being able to enjoy any degree of comfort. Before undressing I get a basin of cold water, put it on the floor, and then undress carefully beside the basin, and hold each garment over it, when the fleas will usually fall into the water. If they are specially numerous, I fill the bath with disinfectant and water, and proceed in the same way. By this method I have succeeded during ten years' work in keeping myself and my rooms and bedding free of this pest. To ensure being absolutely free, it is well to search the garments thoroughly again before dressing in the morning in case a stray one has remained.

If subject to the attacks of an army of fleas, the victim can not sit down and make

war according to any of the above methods of extermination without first suffering in battle. If there is any way of protecting our bodies from the invasion of fleas, it is worth knowing. We get the following suggestion from a writer in *The Lancet*:

During residence in a work-house infirmary, which involved frequent visits to the receiving ward, I kept drops of eucalyptus oil on (a) ankles, (b) wrists, and (c) neck, with successful results. I also carried a

chloroform drop-bottle for emergencies. At another time, being resident in a hospital, and my bed being infested with pulices, I emptied one ounce of eucalyptus oil on the mattress.

We can imagine the sensation up and down that hospital when the human inmates, to say nothing of *pulices*, scented the smoke of the good doctor's battle. The hospital is the last place on earth where any of our insect pests ought to find comfort.

ORGANIZED HOME CARE FOR THE SICK.

By Richards M. Bradley, Boston, Mass., Trustee of the Thomas Thompson Foundation.

Address delivered in Buffalo, N. Y., Mar. 21, 1914.

(Concluded from page 282.)

There is no more difficult situation than that of the graduate nurse at the present time. She is cut off apparently from service to the great mass of people of moderate means, and confined largely to the service either of the well-to-do or to the service of the very poor through endowment or charity. She is subject also to increasing competition from the ex-pupils of rapidly multiplying institutions giving short courses, or correspondence courses.

I do not pretend that this form of office offers a solution for all her difficulties, but it does offer a wider field of service and a larger use for her abilities; it offers not only additional chances for supervising nurses, but the inevitable result of such an office is to bring to notice those cases, in all classes of life, of sickness in the home that can be handled properly only by the This work brings the graduate nurse. family into practical, helpful contact with the graduate nurse so that her true value and the need of her in certain cases can be known and appreciated. I can say this that in spite of the amount of work done by other classes of workers for the sick, there is no more widespread and intelligent use of the graduate nurse than in this community I have described, where such general service has been established.

There is another line in which this development promises better things for the graduate nurse.

When there is a civic organization whose business it is to serve the home, that organ-

ization can bring about such benefit insurance as will put the service of the graduate nurse within the reach of every home that needs her. That is the only adequate solu-Widespread associations in England have accomplished this with the cottage and visiting nurses by very simple and effective methods, and we can do it here for graduate nurses as well, where graduate service is needed, as it so often is. The great mass of independent people of moderate means cannot be fully served in sickness by endowment, because they are too numerous; nor can they be served by ordinary charity, because they will have none of it. They carry the country, no one can carry them, and they need only the help of organization to carry their own burdens. The only endowment that should be needed is that required to put such organizations on their feet and ensure a good standard of efficiency; the balance of the work for the independent classes should carry itself. The graduate nurse can be brought within the reach of all independent families by means of benefit insurance, as soon as there is established a good, all around system of service for which to insure.

Another point of view from which to look at this work, is that of the non-graduate nurse, who once constituted all the service available. The whole difficulty in the situation has arisen from the newness of the graduate nurse in the field, and the fact that for many things she had to displace the practical nurse. This at first brought

about an attitude of mind on both sides where co-operation was most difficult between the two kinds of nurses, but that stage of development is rapidly passing and we can now look for better things.

There are many women not young enough to enter a training school but well adapted for this work, especially women who have lost their husbands, and women whose children are grown up while they still have abundant strength, energy, and good household experience. From time immemorial, these women have gone into nursing and have constituted the back bone of the nursing occupation, but now they have been told that they are too old to take a hospital course, and that they should not take the responsibility of nursing without such training. As a result their places in the field are largely vacant, and much of their work is not done. Here is an opportunity for these women,—where they can do good work with no reproach of being irresponsible, for it is the business of the office to determine what they can or cannot do, and to supply any deficiency through the supervisor. The distinctive feature of this work is that the less trained woman works under the supervising nurse and gets the benefit of her help and instruction, a much safer way of determining her qualifications than any grading that may be attempted by means of diplomas. There is no question in the minds of those who know the quality of women of this kind available, that they are an element absolutely indispensable in the nursing field.

There is another most important question; namely, the question arising where this work touches on the field of charity and the great and valuable work that organized nursing is now doing in that field.

When organized nursing employing visiting nurses began its work on this side of the Atlantic, it found an enormous task before it, and it did the work that came to its hand in seeking to alleviate in a degree, the enormous mass of distress that comes from the poverty collected in our great cities.

This was good for the poverty, but it was bad for organized nursing, for in the public mind organized nursing has too often become inextricably associated with dependence, and finds this association a most formidable obstacle in extending its usefulness to other classes. A recent address to the public service nurses in convention, by Dr. Frankel of the Metropolitan Insurance

Company, who spends hundreds of thousands annually for visiting nurse work, and has a very practical knowledge of the question, fully sets forth this difficulty.

Now this office of ours is expected to deal primarily with the independent classes, composed mostly of people who value their independence and are accustomed to be dealt with in a business way. In order to do our work properly, we have found it desirable to make an entire separation between nursing service and charity administration. This means that while work paid for by charity shall be done by the office, the charity shall not be dispensed by those who do the nursing, and the nursing office shall be opened to the public for nursing and household service, on a basis of entire equality for all.

As this question is a very important one, and its proper solution is vital to the success of any attempt to serve the independent classes, I will give the reasons in full for taking this course.

There are the following objections to stating in the office announcement that the work will be taken at this office for "what people can pay," or that certain kinds of work will be done for certain kinds of persons for less than regular prices, or, what is practically equivalent, for less than cost. This makes the office an agency for relief of a certain kind, as well as an agency for nursing.

Now this announcement that people need not pay regular prices if not able, instead of bringing in more money to be used for the relief of this form of distress, among the people with whom we wish to deal, has exactly the opposite effect from that intended. When the average citizen has trouble about paying his bills, he generally gets some relative or friend to help him out. This announcement that people need not pay if they are hard up, relieves from responsibility those who would otherwise come to the aid of the relative or neighbor who is in difficulty, and makes him think that somebody else has undertaken it. On the other hand, there is nothing in the maintenance on a business basis, or on a basis of equal treatment for all, of the nursing office to prevent the raising from outside sources, the money actually needed for charitable relief of this kind and its use in obtaining service from this office. may be that the words "business basis" convey a too mercenary idea, and another word may be better. Let us put it this

way. Our organized nursing needs to be civic nursing not charity nursing.

The advantage of this course can be shown by the fact that the Brattleboro office took the following stand, and got the following result:

The report of February 1st, 1910 says:

"There is one thing that we are not trying to do: We do not intend to deprive our churches and other charitable and benevolent organizations of their own pecu-

liar fields for doing good.

"We are a machine for giving service in sickness to all at the least possible cost, but our business is not to provide that cost. Whether the money used through us be a merchant's surplus, a workman's savings, or the allowance of a fraternal order, a church committee's offering, or the funds of a town officer, we are going to try to make the money do better service than ever before, but it is not our business to provide that money. We are merely a machine for doing the work, and those who have the work done will furnish the fuel to run the machine.

"We are a machine, that is, so far as money goes, but not a mere machine in another sense. If we cannot make our work a human expression for ourselves and others of the spirit that underlies true neighborliness, our mere working machinery will be worse than useless."

What has been the result of this policy when once understood?

Nursing expenses for those who cannot pay full prices are paid by town officers, tuberculosis association, charitable funds, churches, fraternal orders, friends, relatives, benevolent individuals, and everybody else except by this office.

The office has never committed the iniquity of making money, but it is able to do more work and better work with the money at its command than would be the case if the office said it would remit to those who cannot pay, for by saying this it would really remit, not to those who cannot pay, but to those who ought to help.

Every place has sources that can be drawn upon for the purpose of relief, that will not be reached if this kind of office attempts to undertake the whole thing, instead of simply attempting to furnish the service.

The applicant himself is often among those who can help if he is given a chance; sometimes he fails because of his own fault, but more often because not supplied

with the right means of insuring against emergencies. There are sufficient instances of this form of insurance in successful operation. In some regions, hospitals and nursing systems are largely supported by insurance or benefit payments, and any attempt to enable people to pay in this way should not be discouraged by a system of remissions from the nursing office.

Another objection to giving financial relief in any form from the same office where service is arranged for, is that it requires two different kinds of mind, and two different kinds of training, to do these two different things well, and you frequently find a very good nurse with her mind so full of nursing, that she is not adapted for the relief part. Moreover it often embarrasses her nursing work, as it brings in financial disappointments and controversy from which she should be free, if she is to handle the family effectively as a nurse.

The lack of ability of nursing organizations to co-ordinate their relief work with other relief work is sufficiently well known, and the waste resulting therefrom is sufficiently notorious not to need enlarging upon. The latest claim of an enterprising agent of relief in Boston is that she has found as many as nine nursing organizations infesting a single family.

But the last and most important reason, why financial relief should not be mixed with nursing is that it imperils the whole scheme as to its ability to get the work done that should be done. By bringing in this charity element, we give the impression to the class of persons that we want most to reach, that we are in a charitable line. The persons, not considering themselves objects of charity, will fail to take us seriously as an agency for supplying their own wants. You cannot deal with them in that way.

If the office is to cover the field intended, five-sixths of the people who use it would be ordinary citizens accustomed to pay market prices for what they get, and accustomed not to have their financial affairs inquired into except for credit. Their usual attitude toward the office should be like that of the people who deal with the savings institutions and ioan associations, where they expect fair rules and require no special favors.

To put it briefly, the work of handling sickness in the homes of the independent people of moderate means, who make up the bulk of the population is a civic work and not work of charitable relief, and it can be accomplished only by a civic nursing organization, not by a charitable nursing organization.

Since the establishment of this work, certain other experiments have been made on the same line, and more knowledge as to its use elsewhere has been gained.

It has been found that attempts to establish it where it is recommended to persons primarily interested in other things, and only half believe in, or understand it, To have any good result in no good. results, persons are needed in charge who believe in this work, have practical knowledge of its workings, and have a primary interest in making it succeed. It must have workers who are not taking a few half understood features of it in order to graft them onto other methods and ideals that are inconsistent with its basic principles. In addition to this, it must be in the control of a lay body who have a primary interest in having such work established, and are willing to give it sound business counsel and the necessary financial help in starting.

For this reason there has been undertaken a special Bureau for assisting in organizing this work, with the idea of making further studies of the actual needs of various communities in handling sickness, and also of assisting in the starting of a few offices for experiment and demonstration as fast as the proper women can be provided to take charge of them, and responsible civic bodies are found ready to organize and control them. Such offices are to be used as training centres for workers in the field.

This organization has also the additional purpose of getting in touch with and giving help and assistance to persons who have an especial interest in this line of work, and likewise the purpose of getting aid and counsel from all who are interested, for the work is still in its formative stage, and the things to be learned and done are legion.

I have given you what is a far too imperfect account of the nature of this work and of some of its problems and difficulties.

The exact form that I have outlined may not be applicable to all communities, but I thoroughly believe that the basic principles and methods on which it is founded have application in every community from the greatest city in the East to the smallest hamlet in the Northwest.

You may be asking yourselves, what does this mean to our community and to ourselves?

It means this to your community. The test of success in any nation, next to the maintenance of its moral and spiritual integrity, lies not in the great aggregate production of wealth, but in the ability of the average citizen to bring up his family with industry and frugality in home surroundings of reasonable comfort and decency.

In the successful maintenance of millions of such homes lies the strength of the nation, and the weakening of these homes is the weakening of the nation. What we have most to dread in our present condition is the weakening of the home.

Into thousands of homes throughout the land comes needless disaster through sickness that good organization could avert, weakening or destroying those homes one by one. It is the needlessly unfavorable condition that we allow to exist that caused many of these homes to go under in the time of stress, homes that might be saved to add to the nation's strength. Here in the failure of modern advance to help the average home in the hour of trial, is a weak link in the chain that if remedied will make the whole length stronger.

Now do not blame the nurses and doctors for this.

It all comes back in the end to our own personal relations to each other and to the community. Many of us know of the old custom that once was universal, and still exists in many places. The personal help given when the neighbor's home is visited by sickness. How our mothers and grandmothers used to go out, as a regular thing, to watch by the sick and perform with their own hands the offices of birth and death in the homes about them.

Conditions have changed. Greater knowledge calls often for scientific skill that the old household nurse knows not how to render. Social conditions likewise have changed, and strangers from the ends of the earth, who know not each other's ways, are thrown side by side in city and country, many families being far from all kindred and friends, in their time of trouble.

But the spirit of religion and the spirit of humanity have not changed, they are merely searching to find different methods and different means of expression to suit these different conditions.

That is why you are seeking to do by organization what you once were able to

do by individual efforts, and striving to forge new instruments with which to arm the old spirit of human brotherhood.

You all know that increasing wealth does not simplify our church problem. The little frame church built by a few pioneers by the sweat of their own brows, out of their poverty and despite of their hardships, has in it something that the most beautiful and costly structure, that takes its place, may often lack, and can with difficulty attain.

We know we cannot get our religion done for us by money. We cannot hire out our duty to our God. Neither can we hire out our duty to our neighbor, nor place it unreservedly in professional hands no matter how skilled or devoted. It is because we, the civic element, have tried to do this, and have tried to throw over our responsibility upon professional workers, that we have failed so miserably in looking to the welfare of our sick, in spite of all our advance in wealth and knowledge.

It is not the fault of our professional nurses that they have been brought to seek, through legislative action and strict professional rules, an artificial means of upholding the dignity and interest of their profession. It is more the fault of conditions we have imposed upon them, in sending the young nurse forth from her training schools into a weltering chaos, where little or no civic organization exists, and where mercenary motives are too often the only thing in sight.

There are plenty of them who want something better if we will do our part. It is our hope and belief that a better day is dawning when the young nurse in training is to be told that the highest goal of her profession is to make herself not a worker loyal only to a limited body of graduate nurses, but a leader of workers for the sick. One who will be the adviser, supporter and friend of every good woman in her community, who wishes honestly to give her labor, strength, and care to the sick and helpless.

Yet if these things are to be brought about, it can be only because we have more people in every community who feel again that they are the keepers of their brother in sickness, and are giving to the work not only their money, which will be needed but their business brains and their vital interest; who are finding out what the work is that needs to be done for their neighbor in sickness, and are seeing that it is done.

APPENDIX.

A FEW TYPICAL CASES.

Taken from Different Offices.

Case No. 1:

This case is an illustration of service to one of the large class who live in boarding houses, and find it desirable, when possible, that the household nurse or attendant should be able to go to her own home to sleep. The patient in this case was a school teacher afflicted with partial paralysis. During the acute stage of the disease she was cared for by a trained nurse. When the doctor thought it expedient, she applied to the office for a woman who could give her the proper care, get her meals, and be an agreeable companion,—as the patient had reached a stage where entertainment was necessarily a part of the cure. She also wished that the attendant, after getting her ready for the night, should go to her own home to sleep, as the boarding house was crowded. An attendant was supplied, at the rate of \$15 per week, who met all the requirements. She stayed until the patient was well enough to be taken to the home of a friend who lived in the country. The cost for four weeks was \$60.

Case No. 2:

Another case where the nurse went home at night was as follows:

The patient was a boy 8 years old, very ill, and with no hope of recovery. His mother had for more than a year cared for him herself, but she had become worn out, and needed the assistance of some one young enough to play with the child, yet with sufficient experience to watch him closely for symptoms of epilepsy. The attendant would be expected to help in getting the meals, and do whatever might be needed to help the mother, who was a dressmaker, and who tried to do some work

when the child was well enough. As this was the attendant's first case, the charge was \$8 per week. She slept at home, but got her meals at the home of her patient. She was retained for eight weeks, leaving at the early part of the summer, when the mother felt that she could resume the full care of the child for the summer at least. The cost to the mother for eight weeks' good service was \$64.

Case No. 3:

One of the local doctors called for a nurse to visit one of his patients, to prepare her for an operation, and to arrange to attend the operation the next day. It was an emergency case, and the doctor thought it best that the patient should stay at home rather than go to a hospital. The graduate went as requested, and found the patient in a very nervous condition, and that no arrangement had been made for care of the patient after the operation was over. The nurse talked the situation over with the patient and promised to send an attendant the next day, who would get there before the trained nurse should leave. The attendant would be expected to care for the patient, keep the house, doing whatever was necessary, except the washing, care for four children (the eldest 8, the youngest Everything went very well; the attendant stayed two weeks and left when the patient was able to be up and about. The cost for the attendant was \$24. The patient's husband was a carpenter. This case called for a mature woman who had had experience with children,—as the nervous condition of the woman made the management of the children the most important phase of the problem. The nursing care after the first few days was quite simple. Case No. 4:

An attendant was needed to care for a woman who was suffering with acute rheumatism. Her daughters had been trying to care for her, but were unable to control her. She refused to go to a hospital. The people were middle-class working people, and the attendant was to be paid by a sisterin-law who was a stenographer. An attendant was sent at \$12 per week. In two weeks she was worn out and a second was sent, who stood it for four weeks (with the

help of a night attendant for about a week). At the end of the fourth week it was thought advisable to remove the second attendant, as she was getting very tired. By this time the patient was physically much better, but was mentally deranged and very hard to care for. The cost for the attendant was becoming a heavy burden, and the office, upon removing the second attendant, sent a third at \$10 per week (instead of \$12). This case is cited to show the advantage to both patient and attendants when it is possible to remove one attendant and supply another when it is necessary, and to be able to supply relief for a night or two; an attendant, if relieved at the right time, can often carry on a case to a finish, when otherwise she would give out from overwork.

Case No. 5:

A doctor called up to know if the office could supply an attendant,—a good, kind woman who would care for the patient and be good to her three little children. The patient was suffering from a very bad middle ear trouble. The doctor was asked how much the attendant would be expected to do for the ear, and he said nothing, as he was doing all the irrigating himself. All that would be expected of the attendant was good general care. An attendant was sent, and the mother and children were given good care. In this case it was important that the attendant should know how to care for the sick; but it was more important that she should be a good, motherly woman who would relieve the patient of all worry concerning her children and housekeeping. The cost of caring for this case was \$45 for three weeks, and the people paid the bill feeling that they had received good service. Case No. 6:

A newly arrived family, who had no relatives in town. Both father and mother were sick in bed, and there were seven children, all under 12 years of age. The rooms were naturally very unsettled. A helper was sent to do the housework, cooking, laundry, and to take care of the children and of the sick people, under the direction of the visiting nurse. Extra bed linen was lent by the association. The helper stayed ten days until the mother was able to do her own work. The service cost of this case was as follows:

TYPICAL DAY OF THE SUPERVISOR.

LEFT home at 8:30 A. M.; went to Mrs. F., a maternity case. Gave general nursing care to the mother and baby, directed the attendant in the care of the other children and the house.

At 10:30, went to Mrs. E.'s, assisted the attendant in the care of the patient; this also was a maternity case.

Returned to the office at 11:30; worked on reports for an hour.

Rested until 2:30 P. M.

Went to Mrs. L.'s, where household nurse is caring for a baby with influenza; relieved the nurse for two hours' rest, as she had been up the greater part of the previous night. Returned at 4:30 P. M.

Gave office relief from 6 until 9:30 P. M. Was called at 11 P. M. to go on a maternity case, four miles distant. Made the needed preparations; remained until after the case was over and gave the first nursing care to the mother and child. Returned home at 4:30 A. M.

WORK OF A HOUSEHOLD NURSE FOR ONE YEAR.

MISS BLANK.

December 18 to January 4: With an old lady who lived alone. The patient was in a demented condition and later was taken to the Retreat. 17 days.

January 6 to January 9: Cared for an old lady who had recently returned from the hospital. Transferred to another nurse. 3 days.

January 9 to January 11: Cared for a baby during the mother's absence. 2 days.

January 19 to February 1: Cared for a case of influenza. Patient recovered. 12 days.

February 1 to February 22: Went to a maternity case; a trained nurse was present at the delivery, and had the case under supervision. Cared for patient, baby, child of two, and housework. Patient made good recovery. 21 days.

February 25 to March 31: Went to care for a convalescing patient who had recently returned from hospital; did the housework in the family. 35 days.

April 1 to April 13: At the Tuberculosis Camp to assist the nurse and do the cooking. 12 days.

April 14 to May 4: Cared for an old lady with chronic diarrhoea, and got the meals. Patient transferred to the hospital. 20 days.

May 9 to May 23: Cared for a patient with erysipelas; was advised in regard to sanitary precautions before going to the case; called up every day to report. Got the meals for patient and husband. Patient recovered. 14 days.

May 25 to June 8: Assisted in the care of a patient with apoplexy. Transferred to a graduate nurse. 14 days.

June 10 to July 1: Cared for an old lady with a fractured hip. Transferred to care of family. 20 days.

July 10 to July 19: Maternity case, under supervision. Cared for three other children in addition to patient and baby. Patient recovered. 9 days.

July 20 to August 3: Vacation. 14 days. August 3 to August 10: With an old lady who had a fractured hip. Died. 7 days.

August 13: Tuberculosis Camp for one day.

August 13 to August 29: Tuberculosis case. Transferred to care of family. 16 days.

September 7 to September 17: Maternity case, under supervision. Got meals for family of two. Patient recovered. 10 days.

September 21 to September 23: Was

with neurasthenic patient. Transferred to a sanitarium. 2 days.

September 25 to October 4: With a patient who had cancer of the bowels. Transferred to care of family. 9 days.

October 4 to October 6: Cared for a patient who had indigestion. Got the meals for a family of two. Patient recovered. 2 days.

October 9 to October 30: Maternity case, under supervision. Also cared for child two years of age and housework. Patient recovered. 21 days.

November 7 to November 16: With an old lady who lives alone, and was sick with chronic diarrhoea. Care of patient and housework. Transferred to care of family. 9 days.

November 16 to November 19: Maternity case, under supervision. Cared for patient and, with aid of older children, got meals for family of eight. Patient recovered. 3 days.

November 20 to December 7: Maternity case, under supervision. Housework for family of three. Patient recovered. 17 days.

December 10 to December 20: Maternity case, under supervision. Care of patient, baby and 2-year-old child. Patient recovered. 10 days.

Number of days on duty during the year,

NOTES ON THE CAMPAIGN AGAINST FILTH AND FLIES.

THE long war which began with the slogan "Swat the fly" has only begun but it is a fight to the finish. There are many torpid and dirty folk who are too lazy to take a hand in it, but they will some day be The foremost fighters forced into line. have gone through the first stage, and are applying preventive tactics—trying to see how many flies they can prevent. This is a sound sanitary practice and appeals to all thinking people. But there is an enor-mous lot of hard work ahead of us before we can bring everybody to realize the necessity of this campaign.

We believe that nurses are among the strongest forces for cleanliness and decency in modern life. That is why we are presenting here a few very plain facts to show how some of our sanitarians are striving to educate—and shame—our estimable citizens into a more vigorous hatred of one

of their most insidious enemies.

If these facts are disgusting, so much the better. We must appeal to our national sense of decency if we are to become more decent. We quote from a review appearing in the Monthly Bulletin of the Indiana State Board of Health—a periodical that hews at the root of disease and death.

EATING HUMAN EXCRETA.

Stiles and Keiser in the Public Health Report of the U. S. Public Health Service, for November, tell how they have proved that not a small percentage of human beings

are constantly ingesting human excreta. They find that certain protozoa (Entamoeba coli, Lamblia and Trichomonas) exist only in human excreta and that these parasites are passed from one human being to another in human excreta. In other words, if the para-sites named are found in a person's discharges he got them by eating the infected discharges of another person. Then the investigators further prove that a much smaller percentage of persons using indoor closets are found to be carriers of Lamblia, etc., than are found among the users of outdoor closets or privies. The writers present a faultless argument to show that flies are the principal means of bearing the enteric protozoa to food and thus finally they are introduced into men. "Flies finally they are introduced into men. breed and feed by thousands in surface privies and fly to the kitchens that are near by. For instance, in 24 hours' time 293 flies were caught in a Hodge fly trap placed in a privy, and 1,742 flies were caught during the same 24 hours in another flytrap placed in the corresponding kitchen about 40 feet away."

The investigators examined 187 unselected persons and found 30 per cent. infected who

lived in houses with outdoor privies and 20 per cent. infected who lived in houses with indoor water closets; however, privies were found in the same or adjoining block of houses; hence these people were still subject to the possibility of fly-borne infection.

PRACTICAL APPLICATION OF THE TEST

We are using this test in a practical way to induce people to improve the sanitation. Upon finding the infection present we notify the mother of the child that the microscopic examination shows that her child has swallowed excreta, probably in food contaminated by flies, from some surface privy; we advise her to request the local health officer to inspect the block in which she lives to determine whether there is any insanitary privy near her, supplying her table with contaminated flies, which might continue the infections to her child or other members of the family.

The mother sees some privy in a near-by backyard, sees—as she never saw before— the danger of the surface privy, and she demands an improvement in the sanitation.

Of all methods by which we have tried to arouse sentiment against the surface privy, we know of none equal to this in promptness of result.

The possible exceptions to the fly transmission do not worry us. The water here is sand-filtered and can scarcely play an important role. Flies can and do carry the infections; we demonstrate the presence of the infection; the mother sees the privy and the flies, and she sees that the possibility of continued infection is ever present in this climate.

In cases of necessity we occasionally tell the family that we can not prove whether the infection came from the privy of a white family or of a negro family, and this statement tends to add to the desire to have the insanitary privies made sanitary.

SICKENING

The following is taken from the Seymour Republican of recent date:

"FATHER, MOTHER AND FIVE CHILDREN ILL
OF TYPHOID. IMPURE DRINKING WATER
IS SAID TO BE CAUSE OF ILLNESS IN
WEBER FAMILY NEAR
DUDLEYTOWN

"Every member of the family of Henry Weber, of Dudleytown, is ill of typhoid fever. One son, aged sixteen years, died from the same disease last week and was buried Friday. Mr. and Mrs. Weber are both ill and five other children are sick, two of them being in a serious condition

of them being in a serious condition.

"The epidemic of typhoid at the Weber home is believed to have resulted from impune drinking water. The supply comes from a well and a spring both of which are in the vicinity of the barn lot. A local physician has charge of the family and is looking into the cause of the disease with which the entire family is afflicted. It is said that the water has been analyzed and has been pronounced impure."

COMMENT: Whether or not the germs were taken in drinking water, still it is true all of this sickness and death came from ingesting human excreta. Oh! decency and cleanliness where art thou? We advise Mr. and Mrs. Weber to build a sanitary privy.

None of us will have to go outside our own state to discover such fearful conditions as are described above. We may encounter something just as bad in the "summer resort" where we are going for a little rest. If we do, let us preach one plain sermon to our erring landlord and pass on to a more decent resort—before we pass on to the "better land."

As if these frightful details were not enough for the people of his state, read another indictment which the loyal editor of the *Bulletin* hurls at them:

I sat on the porch of a house in a certain town one summer evening. It was hot and sultry. Every once in a while a gentle movement of the air would bear foul odors to my nose. It was the nearby outhouses I smelled. What kind of people are they who have such surroundings. Are they strong-minded and clean? Think of people so disposing of their sewage as to poison the air and also make it possible for flies to transport unspeakable filth to their food. Why shouldn't such people have typhoid fever? They invite it, don't they? Surely, every man is the architect of his own misfortunes. Foul outhouses and flies spell typhoid. Why have them? The answer is simple. They who have them are not of a high order of mentality. They are weak in righteousness and impractical.

If the lives of our citizens are really worth saving, this kind of teaching is worth while. Nothing else will take its place at this stage of the campaign against disease. Now let us get right at the root of the battle for prevention of flies—and typhoid. The Chicago Sanitary Bulletin, another educational factor, tells us how:

SWAT STABLE MANURE WITH PARIS GREEN TO PREVENT BREEDING OF FLIES

The favorite breeding place of flies is the manure pile; the great majority of these pesky, dangerous insects comes into life in our stable wastes.

Until recently there was no simple, efficient and inexpensive method known whereby maggot life (the early stage of fly life) could be destroyed in manure without injuring the fertilizing value of the manure.

Paris green in watery solution—I pound to 25 gallons of water—appears to be the solution of the problem. It proves to be highly efficient as a maggot killer, it is easy of application, comparatively inexpensive and, in a negative way, increases rather than diminishes the fertilizing qualities of the manure.

Take a comon garden watering can, fill it with water, add a teaspoonful of Paris Green and stir until dissolved. Use this daily on the fresh manure and you will swat the fly in the most effective way.

This weak solution is not dangerous to stock; they would have to eat large quantities of the bedding to be affected.

A can of this solution should be kept in every barn in Chicago. Label it "Poison."

Doctors and nurses must never forget that they have a graver responsibility than the citizen who wages war on the fly. They must be in the front of every popular revival of interest in sanitation and personal hygiene, but they must do more; they must see that their own cases are so managed as to be useful object lessons to the community, and, most emphatically, that they do not become foci for further spread of disease. On this point the *News Letter* says, in a thoughtful editorial:

Plain cleanliness never seems to appeal to the public at large and the tendency of the times is rather to wheedle or cajole the public than to urge upon them what they do not care for. It seems to them rather amusing, for a time at least, to kill flies. It is interesting to see who will kill the most. But to keep premises clean so that the flies will not breed, to remove all filth and dirt at once so that there will not be contamination for the fly to carry, to keep food clean and covered up so that the fly cannot walk on it and possibly contaminate it, all these things savor too much of work and thought. It is too

much trouble to be careful along such lines as those, and yet how much more effective and simple such a course would be. Would it not be well to try to impress the desirability of such care more upon the public mind? As C. E. A. Winslow said some time since regarding disease, in an article in the American Journal of Nursing, entitled "The Role of the Visiting Nurse in the Campaign for Public Health": "Yet it is, I think, more and more clear that the real strategic point is by the bedside of the patient and at the elbow of the convalescent or the carrier. Here the chain of infection can be broken far more surely and more economically than at any other point. The prompt detection of infected persons and their isolation are most effective of all methods of stopping the spread of communicable disease and the most universal, if one interprets isolation broadly."

Questions and Answers.

The following answers are not "official." They are prepared for the editor.

VERMONT BOARD OF REGISTRATION OF NURSES.

MONTPELIER, MAY 8, 1913.

PRACTICAL NURSING AND DIETETICS.

Do not write questions—number them and letter sub-divisions.

Only answer ten questions.

1. Name three qualifications necessary for a nurse to have.

Ans. Health, physical strength, intelligence.

2. Name three ways of introducing medicines into the system.

Ans. By mouth, by inunction, by hypodermic injection.

3. How would you collect a twenty-four

hour specimen of urine?

Ans. At a given hour have the patient empty the bladder; this urine is discarded. From this time on have all urine passed into a clean container and emptied into a larger container which is to hold the twenty-four hour sample. At the same hour on the next day (twenty-four hours after the beginning of the period) have the patient empty the bladder and add this to the sample, which is then complete. If at any time a portion of the urine is contaminated by feces it must first be measured and then discarded; if some urine is lost during defecation, the amount lost must be estimated as nearly as possible. The amount of urine lost during the period must be reported as

"lost" when the specimen is given to the analyst.

- 4. Define the following:—
- a. Subsultus.
- b. Tympanitic.
- c. Dyspnoea.
- d. Cyanotic.

Ans. (a) Twitching of muscles and tendons as found in the typhoid state. (b) Condition of the abdomen when distended with gas or air; or the bell-like quality of the sound produced by percussing over a cavity filled with any gas. (c) Difficult or labored breathing. (d) Condition of the skin when dusky or blue from impeded circulation of the blood.

5. How could you improvise a Kelly pad.

Ans. Roll a sheet or single blanket into a rope-like form; roll this by several turns into one end of a rubber sheet or oil-cloth, forming this end into a semi-circle on which the patient lies. The free end of the rubber sheet falls over the side of the bed or table, forming the "apron" of the pad.

6. a. What position would a patient naturally take when suffering from peritonitis? b. Why?

Ans. (a) Flat on the back, with legs and thighs drawn up. (b) Because this position is the one most favorable to relaxation of the abdominal walls and the relief of pressure and tension upon the peritoneum.

7. State in detail your method of mak-

ing and applying a mustard paste.

Ans. Take 1 part of mustard and from 4 to 10 parts of flour. Make flour into a paste with warm water and stir in mustard thoroughly. Spread on thick muslin with edges turned over; cover free surface with layer of gauze or thin muslin. Anoint skin lightly with sweet oil and apply paste. Lift an edge of the application occasionally to observe the effect on the skin, and remove the paste when the skin shows marked reddening—usually after 5 to 15 minutes.

8. In what way does the serving of food

affect digestion?

Ans. Food that appeals to the appetite will stimulate the digestive processes and will usually be digested better than that which makes no such appeal. For this reason the esthetic element is important in the serving of food, particularly during illness. Food should look good, smell good, and taste right. The sight and smell of well served food initiate the digestive processes even before the food is tasted. Most patients respond favorably to the quality of daintiness in the tray, and there are few who do not demand cleanliness.

9. How would you make Kumyss?

Ans. Take 1 tablespoonful water and 1½ tablespoonfuls sugar, make syrup and cook 1 minute. Take 1-6 cake of yeast and soften in 2 tablespoonfuls warm milk. Add

these ingredients to 1 quart of warm milk and shake well. Place in sterile beer bottles, well corked, and stand up for 12 hours in temperature of 70 degrees Fahr. Then turn on side and cool slowly. Use after 24 hours. (Pattee.)

10. Explain the advantage of taking a glass of milk slowly.

Ans. Milk ingested slowly into the stomach is considerably diluted by the saliva, which separates the particles of casein and favors the formation of very fine curds. It is also slowly and thoroughly mixed with the gastric juice and thus prevented from coagulating in large masses. There is the same argument for drinking milk slowly that applies to slow and thorough mastication of solid food.

11. Why is bread more easily digested when toasted?

Ans. Because some of the starch granules are converted by heat into dextrose which is more easily acted upon by the digestive juices than other forms of cooked starch. The formation of dextrose is one step in the conversion of starch into maltose.

12. How is the fuel value of food expressed?

Ans. By the number of calories that the foods will furnish when consumed in the body. A calorie is the amount of heat necessary to raise the temperature of one kilogram of water one degree Centigrade; it is equivalent to the force required to lift one ton a distance of 1.54 feet against the force of gravity. The calorie is the heat unit of foods.

University of the State of New York

21st Nurses Examination

ANATOMY AND PHYSIOLOGY

Tuesday, January 27, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. What constitutes the pulse?

Ans. The alternate increase and decrease of blood pressure within a vessel caused by the contraction of the heart, which propels the blood in a series of waves.

2. Locate and describe the tonsils.

Ans. A pair of organs on each side of the fauces, between the anterior and posterior pillars. They consist of glandular tissue (lymphoid), each having 12 to 15 deep openings leading into "crypts" which are lined with mucous membrane.

3. At what age does the cutting of the deciduous teeth begin?

Ans. About six months.

tect and nourish the spinal cord.

Ans. Dura mater, arachnoid and pia

What is the character of the membrane that lines passages and cavities communicating with the exterior?

The mucous membrane, consisting of a base of connective tissue covered with one or more layers of epithelial cells which

constantly secrete mucus.

What is the character of the mem-

brane that lines closed cavities?

Ans. Endothelial or mesothelial, membrane, consisting of a thin layer of connective tissue covered with thin, squamous cells, and communicating with the lymph channels by small openings called "stomata."

Describe a cell.

Ans. A unit mass of protoplasm, containing a nucleus which is the organ of cell division, and usually covered by a cell wall. Cells and intercellular substance make up all the tissues of the body.

Name three different channels of elimination by the body.

Ans. The urinary system, the lungs and

air passages, the sweat glands.

9. What position do the white blood corpuscles occupy during normal circulation?

Ans. Generally very close to the walls of the blood vessels.

Which is the pyloric and which the cardiac opening of the stomach?

Ans. Pyloric, the lower opening or outlet, leading to the duodenum. Cardiac, the

4. Name the three membranes that pro- upper opening, or inlet, which receives the esophagus.

> 11. What are glands?

Ans. Organs made up chiefly of epithelium, which remove from the blood various substances known as secretions or excretions.

Define (a) pneumogastric, (b) hy-

pogastric, (c) epigastric.

(a) Pertaining to the lungs and stomach, or to the pneumogastric (vagus) nerve, which is distributed to the heart, lungs, stomach and other viscera. (b) Pertaining to the lower central portion of the abdomen, lying below the umbilicus. (c)Pertaining to the upper central portion of the abdomen which includes most of the stomach.

13. Locate and describe the patella.

Ans. A flat, triangular bone, placed at the front of the knee joint. It is attached by a ligament to the tibia below, and is continuous with the quadriceps extensor and its tendon above.

14. Locate the hard and the soft palate. Ans. The hard palate forms the roof of the mouth and the floor of the nasal The soft palate is a fibrous and muscular continuation of the hard palate, forming an incomplete partition between the mouth and pharynx.

15. What is protoplasm?

The "physical basis of life." is a semi-fluid, albuminous substance of very complex chemical composition, forming the granular portion of cells and possessing the power of growth and reproduction.

University of the State of New York

21st Nurses Examination

MEDICAL NURSING AND NURSING OF CHILDREN.

Tuesday, January 27, 1914—9.15 a. m. to 12.15 p. m., only.

- 1. What articles should the nurse provide before giving a child a bath?
- 2. Outline the general nursing care of a case of whooping cough in a four year old child.
- What special qualifications should a nurse who has the care of sick children
- What are the bad effects to be watched for and guarded against in giving hot packs or baths?
- 5. Mention four bad effects that may result from neglect of a fever patient's mouth.
 - 6. What is marasmus? Give symptoms.
- Name important points in the nursing care of marasmus.
- What are the three most important considerations in the nursing of all forms of anemia?
- How should catheters be prepared for use?



- 10. Mention some points to remember regarding the care of the catheter while catheterizing.
- 11. How would you take a throat culture?
- 12. Mention three special points in the nursing of dysentery.
- 13. What are the signs of hemorrhage in typhoid fever?
- 14. Describe the appearance of blood in hemorrhage from the lungs. Define the nurse's duties in such an emergency.
- 15. Briefly outline the general care of a child having any contagious or infectious disease.

OBSTETRIC NURSING.

For Female Nurses.

Wednesday, January 28, 1914-9.15 a. m. to 12.15 p. m., only.

- 1. What antiseptic solutions should be prepared for use in the care of the mother and the newborn infant?
- 2. Give the strength of each solution mentioned in answer to question 1.
 - 3. Describe the brim of the pelvis.
- 4. Give a full description of the structure and the function of the Fallopian tubes.
- 5. Define (a) mastitis, (b) primipara, (c) puerperium, (d) obstetrics, (e) embryo.
 - 6. Give the three stages of labor.
 - 7. What is meant by a "blue" baby?
- 8. Give the symptoms of puerperal infection.

- 9. Describe the routine care of a patient on the eighth day after a normal delivery.
- 10. Outline the daily care of an infant eight days old.
- 11. What is the nursing treatment for enlarged breasts in an infant?
- 12. Describe the nursing care of ophthalmia neonatorum.
- 13. State the nursing care after a primary perineorrhaphy.
- 14. Give the care necessary for the infant's feeding bottles and nipples.
 - 15. What is an ectopic gestation?

Have your answers to these questions ready for comparison with the answers to be given in a later number of the GAZETTE.

THE LITTLE BOY'S PRAYER.

"Dear God, I need You awful bad,
I don't know what to do;
My papa's cross, my mamma's sick,
I hain't no fren' but You.
Them keerless angels went an' brung,
'Stid of the boy I ast,
A weenchy, teenchy baby girl;
I don't see how they dast!

Say, God, I wish't You'd take her back,
She's just as good as new;
Won't no one know she's secon'-hand,
But 'cepting me and You.
An' pick a boy, dear God, Yourself,
The nicest in yer fold;
But please don't choose him quite so
young,
I'd like him five years old."

—Medical Brief.

MEN who are occupied in the restoration of health to other men, by the joint exertion of skill and humanity, are above all the great of the earth. They even partake of the divinity, since to preserve and renew is almost as noble as to create.—Voltaire, Philosophical Dictionary.

DISPATCH is the soul of business; and nothing contributes more to dispatch than method. Lay down a method for everything—and stick to it.—CHESTERFIELD.

Ir isn't the work we intend to do,
Or the labor we've just begun,
That puts us right on the ledger sheet
It's the work we've really done.

THE

DIETETICANDHYGIENIC



PUBLICATION OFFICES

87 Nassau St.

New York

\$1.00 Per Annum. 15c. Per Copy.

Entered as Second-Class Matter at the New York Post Office.

COMPANIES ON PAYORS III

The best antiseptic for purposes of personal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste. Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teeth.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts

water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY

LOCUST AND TWENTY-FIRST STREETS :: : ST. LOUIS, MO.



RAPIDLY
GETTING
INTO
EVERY
HOSPITAL
ON
EARTH
BECAUSE

is a more powerful antiseptic than bichloride,

UHINOSOL non poisonous, no injury to hands or membranes, no smell, instantaneous deodorant, no damage to tissues, a pronounced analgetic.

ACCEPTED BY COUNCIL ON PHARM. AND CHEM. A. M. A.

POWDER, TABLETS, ASEPTIKONS
SAMPLES AND CLINICAL REPORTS ON REQUEST

CHINOSOL CO., 54 South St., N. Y.

THE

DETETICANDHYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A. M., M. D.

Vol. XXX.

AUGUST, 1914

No. VIII

EDITORIALS.

THE NEW DISINFECTION.

THERE would appear to the man on the street to be nothing of human interest, nothing spectacular, and to the woman in the wrapper nothing romantic about disinfection. No work on this subject could conceivably be a best seller, unless it had application to the social evil or something like that. And yet to the physician the train of events culminating in disinfection are likely to be the profoundest in human life, relations and fortunes. To the health official disinfection is a subject important in the public service inversely as the laity are likely to find it malodorous.

The newer disinfection—the killing off or rendering impotent the germs of a given disease in homes which it has invaded—has come about through newer knowledge gained in the last half century as to how infectious diseases (yellow fever, typhoid, malaria, measles tuberculosis and so on) are transmitted to humankind. Doctors still well in middle life will recall when a saucer containing a solution of carbolic acid placed in the sick room was considered a potent preventive of such infections as diphtheria, scarlet fever and measles. When epidemics of yellow jack threatened our ports a great deal of property and merchandise was confiscated by quarantine authorities, on the erroneous theory that fabrics (fomites) contained and conveyed the germ of that dreadful disease. And comic relief was afforded in the situation by an official kiting

through railway cars that had come up from our Southland with something burning in his hand under the obsession that the car would thus be rendered free of the yellow fever virus. Yet everybody knows that yellow fever is transmitted only and solely by a special kind of mosquito; malaria only by another kind of mosquito, and never in any other way-certainly not by bad air (malaria); the body louse transmits typhus fever: such diseases are not directly from one person to another but by such intermediaries as these. Cholera and typhoid fever are not contracted through atmospheric effluvia but solely by swallowing their essential germs in impregnated food and drink. Diphtheria is probably communicable through the air; but only by direct contact with the sick, as in kissing; or by contact of the mouth and nasal surfaces with the diphtheria germ One need apprehend nothing from the air of a diphtheria patient's sick room, but only fromsubstances contaminated with his exper-Hospital physicians and nurses torations. careful in their ablutions are in constant attendance on sufferers from diphtheria. scarlet fever or measles for months, without contracting these diseases or being in any fear of doing so. The safest place in the world against diphtheria is the properly conducted ward of a diphtheria hospital. The surest place not to contract tuberculosis is a well managed sanatorium. What

germiphobia, what ignoble public hysteria, what discomfort would be obviated by a general knowledge of such facts. Here as elsewhere fear vanishes immediately it is comprehended.

Nor are scarlet fever and measles transmitted through the peeling from the skin in these diseases; nor is the "peeling" stage, as was formerly supposed, that when transmission is most likely to take place. And measles is infectious anyway only during the first several days of the disease. Such facts, then, have led to more rational public health measures. London for instance, maintains hospital accommodations for some ten thousand infection sufferers and treats nine-tenths of its infectious cases in its hospitals; yet it gives hardly any attention to measles, which is not even notifiable to the authorities. Why not? Because by the time the report is received and the case placed under surveillance the damage has been done. For the same reason disinfection is not now done after measles cases. The only cases of this disease the authorities consider are those occurring in schools and which are at once removed. Charles V. Chapin, the able health officer of Providence, R. I., has for years abandoned the disinfection of the homes of diphtheria, scarlet fever and measles patients, with no increase in the number of secondary patients (such as would have contracted the disease from their sick relatives and friends). Any way the number of secondary cases of scarlet fever occurring in private families directly exposed is surprisingly small—less than four per cent. of those who come directly in contact with the disease, states the superb August Bulletin (on

which these observations are based) of the Department of Health of the City of New York.

Certainly disinfection will destroy germs or render them innocuous; but most germs cannot in any event, retain their vitality and their capacity for mischief for any length of time after leaving the patient's body: and, as a matter of fact, the best disinfectants ever invented are pure air and sunshine: a sick room thus ventilated after the termination of the case, and the bedding, carpets, rugs and so on exposed to the blessed sunshine, with plenty of soap and water for scrubbing up will, for most infections, be all the disinfection necessary. Thus, in accordance with the modern conception of the spread of infections, and following a report of Dr. Herman M. Biggs, its general Medical Officer, the Metropolitan Board of Health last year abandoned fumigation (the burning of disinfecting gases) after the diphtheria case but removed the bedding to its disinfecting station. But when the patient died or was removed to a hospital during the height of the disease, fumigation was done, it being considered possible that fresh discharges containing living germs might be present in the sick room. Measles was similarly handled except that the household goods were not removed for disinfection after death or recovery. In scarlet fever fumigation was done after recovery, death or removal; and the infected bedding was sterilized. In June last, however, the Department discontinued, by reason of the practical absence of danger from the patient's bedding, its disinfection after cases of diphtheria, scarlet fever, measles, cerebral spinal meningitis and poliomyelitis.

THE IDEAL GENERAL PRACTITIONER.

He is virile by virtue of his environment; he is self-reliant from his isolation; he is resourceful from necessity; he exalts common sense above fine theories; he deals with all conditions and preserves a breadth of vision, grasps general principles, and failing the finer technical knowledge of the specialist, is spared the distortion of his perspective. He knows his patient as a man and a friend and not as a commodity, and he it is who exemplifies best and most consistently that unselfish regard for others that glorifies medicine.—Meara in Boston Medical and Surgical Journal.

HEBRAIC IMMUNITY FROM INFECTION.

PROFESSOR J. A. LINDSAY has observed, with regard to the ethnic aspects of disease, and to immunity from Disease Considered in Relation to Eugenics (American Hebrew, August 16, 1912), that certain maladies fail to appear, or appear only in slight degree, among the Jewish people; they suffer less than the peoples among whom they live from alcoholism, the "social diseases" and certain epidemics. On the other hand, they suffer more than the generality of mankind from diabetes, hemorrhoids and nervous diseases (especially blindness, color blindness, deafness, dumbness and insanity). In modern times the Hebrew seems to enjoy some degree of immunity from leprosy, which appears to have prevailed extensively in Palestine twenty centuries ago. (One must recall, however, that the leprosy of the Old Testament probably included several diseases besides true leprosy-psoriasis, vitiligo, eczema, syphilis, lupus.) Yet this observation-regarding the modern Hebrew's immunity from leprosy-is at least interesting with relation to his presumed comparative immunity from tuberculosis. Leprosy is in all probability to-day but a mild and fairly innocuous form of tuberculous infection.

The modern Hebrew is considered by many investigators to enjoy a comparative immunity to tuberculosis — comparative only, of course, for unquestionably many Jewish people have this disease. Professor Lindsay is among those who doubt that the Jew enjoys any special immunity in this regard, whatever may have been the case in ancient times. Nevertheless, he sets forth the circumstances to which such immunity, if it exists, might be attributed: Jews do not often engage in occupations involving much exposure to the weather; they have a special dislike for dust, and practise frequent house cleaning; they are very careful in their choice of meat for food; they suffer relatively little from alcoholism.

A consideration of Jewish conditions in the metropolis would have a bearing on the

much mooted question as to the modern Jews' comparative immunity from tuberculosis. Of two maps of the lower portion of Manhattan Island, the first shows given districts in which the densities of the respective populations is represented. Where the shading is quite black the population is densest; then these shadings progress from very dark to no shading at all, representing populations less and less dense. The darkest shading of all is put over the region that is occupied by the Jews, to the practical exclusion of all other races. In New York City there are now nearly 1,000,000 Jewsabout one-twelfth of all the Jews in the world; and the vast preponderance of the race is to be found in the region noted, probably the most densely populated in the whole world. In the second map the districts are outlined precisely as before; but the one among them all which has no shading at all is this same Jewish quarter. That is to say, the Jews are more closely crowded than is any other community; yet tuberculosis appears to be least rife among them.

This overcrowding would denote practically every factor considered causative of tuberculosis: Personal habits here are no more cleanly than anywhere else; the proper disposition of sputum does not obtain; the air in these tenements is in the last degree vitiated and unwholesome, the streets are very dusty; sweat shop work is done by these poor Jews to a pitiable degree; from early morning to late at night they bend over their machines; their lung expansion is poor and "they have no chests."

Here would appear to be evidence strongly corroborative of the views of Hebraic comparative racial immunity to tuberculosis. And the explanation would lie principally in three factors: 1. Familiarity with an infection through many generations renders a race comparatively immune to it. The negro, for example, is so inured to yellow fever that one safely makes him a nurse for a yellow fever patient; but every other adult negro dies of tuberculosis, a disease with

which they unhappily became acquainted with but a century or more ago. On the other hand the Jewish race, during the forty centuries of its existence, has known tuberculosis, and would on this account alone seem to have attained a comparative immunity to it. 2. There is the character of the food and drink consumed by the or-

thodox and steadfast adherents to the Jewish faith; this must surely obviate a great deal of ingestion of tuberculous infection. 3 Alcoholism is one of the most pernicious of the predispositions to tuberculosis; the Jewish people, as a race, have no drink problem and are generally temperate in their use of alcohol.

AILUROPHOBIA.

BURDICK's absorbing article on cats, in our Leisure Hour Columns of this issue, recalls an investigation on The Fear of Cats, which Dr. S. Weir Mitchell made nearly a decade ago, and in which he enumerated classes of people who have this fear, which he terms ailurophobia. There are those who have cat asthma; those who have fear on seeing cats, without sequent, excessive or emotional manifestations; those who manifest such emotions when a cat is near, though unseen by them; those who can smell a cat without seeing it. Besides these, cases occur "in which the consciousness of a cat is present through its smell once existed, but does not now, and yet the ability to detect unseen cats remains." The great physician and litterateur, now passed away, considered that cat emanations may affect the nervous system through the nasal membrane, although unrecognized as odors. He made an extensive study of this strange manifestation and collected a great many His researches brought to him indisputable evidence concerning a large number of people in whom the presence of a cat gives rise to a variety of symptoms—oppression of breathing, fear, terror, disgust, chilly sensations, horripilation, weakness,

locked jaw, fixed open jaw, (in one case), a rigidity of arms, pallor, nausea, vomiting (rarely), pronounced hysterical convulsions, "cat-mares" — even temporary blindness. These symptoms pass away with the removal of the cat but may leave the sufferer nervously disturbed for the day. In at least one-fourth of Dr. Mitchell's cases terror in grave form was shown to be a family peculiarity. Five in a family of seven had it. In another family the maternal grandfather, two great-aunts, an uncle and a sister were all thus troubled. Sex appears to have no marked influence, but extreme symptoms are more frequent in women

"In my own family," wrote Dr. Mitchell, in American Medicine, "an uncle was the subject. My father, the late Professor John K. Mitchell, having placed a small cat in a closet, with a saucer of cream, asked Mr. H. to come into the room and look at some old books in which he would be interested. He sat down, but in a few minutes grew pale, shivered, and said: 'There is a cat in the room." Dr. M. said: 'Look about you. There is no cat in the room. Do you hear one outside?' He said: 'No, but there is a cat.' He became faint and complaining of nausea, went out and promptly recovered."

Dr. Mitchell was not able to explain the ultimate cause of such ailurophobia.

A man needs to see the stars every night that the sky is clear. Turning down his own small lamp, he should step out into the night to see the pole star where he burns or "the Pleiads rising through the mellow shade."—Dallas Lore Sharp, The Atlantic Monthly, October, 1910.

It may seem paradoxical; but it is true that sentimentalism hardens the heart.

One of the most discouraging things in the world is that a majority of the people who make nuisances of themselves mean well.—London Evening Standard.



WOMAN MOTORISTS.

Apropos Dr. Musgrove's fine article on Automobiles and Nerves in this issue of The Gazette we give here observations of the Journal of the American Medical Association.

Women motorists are increasing in numbers; and this fact is said to be stimulating manufacturers to build cars with especial reference to feminine abilities and limita-"Cranking up" has heretofore tions. certainly been a man's work; and the chauffeur's fracture, occasioned by this maneuver, has not been rare. When the self-starter has been perfected, however, as ft now promises to be, and becomes simple. inexpensive and reliable, about the last mechanical impediment to a woman's handling her own car will be removed. Even now the clutch, which used to require a man's muscular power to disengage, generally needs only the strength which the average woman can easily exert, and new devices make it possible for women to adjust tires. This suggests a brief discussion of the limitations of motoring for women and the not infrequent sequelae, some of which apply to men as well.

Driving a motor car from April to November should be a healthful recreation, both physical and mental, for many women, provided the exercise be within reasonable limits, speeding being eschewed and the car a runabout or light roadster-one, at any rate, not too heavy for a woman to handle. The "weaker sex" are naturally quick of eve and deft of wrist, two qualifications, aside from sufficient strength, which are needed. It may be said, however, that women are in general more excitable and of less steady judgment than men, shortcomings which may prove disastrous in emergencies, or which might render it advisable to confine motoring efforts to areas outside the crowded portion of the larger cities. The rougher contact of men with the every-day things of life, their greater participation from boyhood up in sports and athletics generally better fit them to meet the exigen-

cies of motoring. General athletic training for women and indulgence in sports such as swimming, rowing, tennis or the work of the gymnasium, which develop command and coordination of muscle and brain, would to an extent supply this lack in women, and no doubt many women with such training may become efficient motorists. It may be possible that it should be limited to women with such training. To them it offers much pleasure and benefit, perhaps, and may be indulged in when the other forms of exercise or sport are unavailable or unsuitable. Rational motoring affords opportunity for plenty of fresh air, with improved appetite and increased zest of life, and the everchanging scenes may smoothe and satisfy the emotions, and hitherto unfamiliar aspects of civilization may interest and divert from introspection.

There is, however, quite a formidable array of troubles, nervous and otherwise, which have been charged against motoring, and which point to the fact that the sport at best is a somewhat strenuous one for women. The ailments for which the motor car may be held responsible are due almost entirely, however, to speeding and to the fear of accidents which might thus be engendered.

The "auto-eye" is a spasm of the ciliary muscles (which govern accommodations for distances); to this those who have errors of refraction are specially prone; speeding over an unknown country, through devious roads, the sight being constantly and rapidly attracted by objects now near and now in the distance, makes an abnormal strain on the visual mechanism.

Wind and dust, coupled with high speed, induce any degree of conjunctival inflammation, from a hyperemia to a contagious lesion; the wearing of goggles largely obviates this. Auto-leg is a cramp due to sitting in one position for hours, while the veins and muscles are under strain from consecutive shocks and joltings over bad roads.

The sequelae of nerve strain and nerve exhaustion, such as hysteria and neurasthenia, are not rare, especially among young women who motor extensively. Such attacks come on relaxation after strain in a rapid run over many miles, but they are not ordinarily serious in healthy women; and yet in those not up to par as to their nervous systems, they have grave sequelae. The excitement of motoring may appeal to such women. The ever-increasing stimulation inherent in speeding may sooner or later end in prostration. For such cases entire rest

and complete abandonment of motoring are absolutely essential. All women absorbed in motoring should from time to time consult their physicians regarding conditions which they are unable to account for.

Dr. G. Bryson Delavan considers that while pulmonary diseases should in theory be much increased by motoring, practically such is not the case; indeed, the car properly used is a valuable therapeutic agent. Nevertheless, acute catarrhs and advanced tuberculosis with abnormal temperature certainly contra-indicate motoring.

DOCTOR'S DISEASES.

A LITTLE newspaper item, stuck off in one corner of the page, recently told how a doctor had died of apoplexy on the steps of an elevated Railroad station. Of course, any one might die of apoplexy; and yet this cause of death is not as rare among doctors as in many other occupations.

It's a strange thing to say about doctors—whose business it is to keep other people well that as a class they are more subject to illness than any other, and their expectation of long life is less than in most other callings. This profession has an average of 57 years at death—much too premature in these days.

There are several reasons for this: There is the anxiety and the responsibilities that weigh heavily upon doctors who are generally men of conscience and sympathy. Then there is the amount and the trying nature of most of the doctors' work—the irregular meals and the broken rest, exposure to the elements and to infection. And then there is the scanty pay which most doctors get for their services, not to speak of the difficulty of collecting a great deal of money they have earned; and when to this is added the fact that about half a doctor's work nowadays is done in hospitals and dis-

pensaries, for charity, who can wonder at the overwhelming strain to which these humane men are put?

Broken sleep is one of the most certain causes of the shortened lives of doctors. What this means can be judged by hearing anybody not a doctor talk about how once or twice in his lifetime he had had his night's rest broken. Possibly he has sat up with the coffin of a dead friend. Maybe he has given a couple of hours from his rest to a sick friend. Or perhaps his wife has needed a little midnight nursing. Throughout the rest of his days, in season and out of season, you will find him buttonholing everybody he can get to listen to him, while he explains his noble self-denial and his beautiful Christian act. By and by, when he is seen approaching, his friends (fearing to be told about it all over again) will dodge down a side street, as if trying to avoid a

Yet such night-work is the common lot of doctors, whilst the day's work must go on just the same. Being aroused in the first hour, when sleep is profoundest, is always a shock and frequently a grave one to the heart and the nervous system. That is why angina pectoris, or neuralgia of the heart, is called the doctor's disease.

WHERE WERE THE MOTHERS?

New York City decided recently to have a "baby week." Therefore Mayor Mitchel at once called into conference the Chamber of Commerce, the Advertising Men's League, and the Merchants' Association. "Father, what is the Prussian Diet?" "Rye bread and beer. Be quiet now, will you?"—Buffalo Express.

"What do I owe you for tracing my family pedigree?"

"Five hundred dollars hush money."

ORIGINAL ARTICLES.

DISPENSARY AND OTHER EVILS.

By Arthur C. Jacobson, M.D.

THE abuse of charity which has taken place in connection with the operation of our dispensaries has been not inconsiderable. From eight to twenty per cent. of the people treated in dispensaries are able to pay, according to observers working in different localities. We have a good law covering the dispensaries in New York State. and the State Board of Charities has administered this law in excellent fashion. There are some defects in the law, but these will probably be remedied. Thus it ought to be insisted upon that the registrars be physicians. Provision ought also to be made for the payment of the attending physicians. not from funds representing the fees paid by patients for medicine, etc., but from governmental sources, since otherwise there would be a temptation to run up the number of applicants unduly, something which ought to be discouraged. Free medical service is based upon immoral principles, and can be justified only by specious arguments. The elimination of undeserving applicants can be brought about in several ways. No one should be treated except upon the presentation of a letter setting forth the applicant's inability to pay from his physician, or clergyman, or some one actually acquainted with the circumstances of the patient. The policeman on the beat in which the applicant's home is situated could certify him. Then there should be a clearing house for all patients, like the central tuberculosis clinic of the Department of Health, which registers and investigates all the people treated at the various clinics. Finally, until the universal employment of social service workers in this field, no wholly satisfactory results can be expected. Then the dispensary will become what it ought to be, a great force in the field of prophylaxis. Under these ideal conditions the dispensary would bid fair to exceed in importance the

hospital itself. One of its chief aims would then be the prevention of hospitalism. Social service is now largely confined to the care of the convalescent. In the future it will deal upon a large scale with the hospital "candidate." This development will necessarily take place in the domain of the dispensary. The cost will be borne in some way not now clearly apparent, for such a development, while enormous in scope, is The dispensary itself will not pay the cost, for it can never be a paying institution, and ought not to be if it could. Indeed, the dispensary of the future, a properly regulated institution, will deal only with the very poor.

The dispensary will yet have to serve a better educational purpose. That is to say it will have to provide opportunities for clinical study to the entire profession, as, indeed, will the hospital of the future. We are already seeing the beginnings of what is to be.

We have said that free medical service is immoral. The doctor is not immune from the operation of economic laws. There is a business side to the practice of medicine. No more than any other man ought the doctor to give something for nothing. What is called altruism in the case of the doctor's conduct in respect to the abuse of medical charity is not altruism at all. Why boast of not having taken money from people who did not have any? What we have really failed to do in the past has been to demand and obtain remuneration from the State for our care of the State's charges. Nobody but the medical profession takes care of the sick poor for nothing. Everybody but the doctor is paid by the State. Is it not so? Now that our folly is so evident, and now that we see the relation of this idiotic financial policy to the dwindling of the respect in which the medical profession is held to-day

we cannot strike or in any other radical way help ourselves out of a deserved plight. Circumstances determine our destiny; we do not sufficiently determine what those circumstances shall be. If socialism comes it will not be as a remedy, but as further punishment for our sins, enslaving us the more

There is danger confronting the profession to-day which is not clearly foreseen by the rank and file. It is this, that the sociological side of medicine is being rapidly developed by workers who are not members of the profession. It is absolutely true that the majority of medical men do not comprehend the principles and aims of social service. This is one of the chief complaints of the workers in this field. Very, very slowly the hospital and dispensary men are seeing the light—they who should have been in the forefront of this great social movement. Just as we failed to do economic justice to ourselves and our families in the old days when the abuse of charity was beginning, we are failing to-day to see that one of the greatest movements in the history of medicine is being engineered by lay workers. No wonder the respect that is paid to the profession to-day is perfunctory. A perfect analogy is presented by the clergy, clinging to their outworn dogmas and creeds while the world of men grows more religious and concerned with the fundamentals of the spiritual life every day. The people are actually passing by the church, which cannot follow them. So would it appear to be in medicine. We are absorbed in the problems of artificial immunity and insist that the physician of the future will be an immunizator, while the people are keen about improved social conditions that will create and sustain the natural immunity that should rightfully be theirs. would we have to fear from tuberculosis if the community health were what it ought to be? We sit in the bleachers and watch an occasional Noguchi perform his wizardry. Superb automatons, we perform the classical operations and administer stock vaccines. But we seem to lack organic professional forethought and judgment. Like helpless children we are caught in the great currents that sweep about us, and when we try to reason out things we grow confused, and give them up and talk about the glorious altruism and progress of the medical profession. And our ears are perfectly attuned to the dulcet notes of the flatterers who connive at our debauchment. We are as

adept at anesthetizing ourselves as others. No other class of men consumes so much spiritual absinthe for the abatement of bad dreams. We have dodged our obligations to ourselves so long and so consistently that the economic reckoning is at last upon us and we can dodge no longer. Wherefore do we witness the organization of societies for the study, if you please, of medical economics and sociology. If, after our ages of experience, it is necessary to begin now the study of these things, we shall never learn anything, for we ought to know enough at this late day to at least insure elementary economic justice and survival. Evidently we don't know enough and are actually attending sociological kindergartens and listening to opportunists and tiresome mountebanks who are capitalizing our ignorance and imbecility. In the meantime the cleaning up of our prisons, basically a sanitary and hygienic proposition, is being effected by lay reformers. If the social vision of the profession had been in times past what it ought to have been, the reform of asylums and similar matters would have been credited to it because it would have inaugurated and conducted such reform. We are surrounded by health propagandists today and freak cults of all sorts because we have not ourselves brought about those things after which these well meaning people are striving. Now we talk about educating the public in matters of health, just as though the medical point of view could, by some necromancy, be transferred to the people, which is a great fallacy, since such a thing is the product only of long professional training. It is in the ranks of the "medically educated" public that we find the anti-vivisectionists and other enemies of medicine. We have failed to dominate absolutely in medical matters as we should have because we have lacked social vision and initiative, not because we have lacked knowledge.

It is too late now to set these matters right, and we must sit by and take the bitter medicine that is in store for us, economically and professionally. Instead of controlling circumstances we are fated to be controlled by them. This is not pessimism but a statement of the truth. "The man who looks out of the window on a rainy day, when the landscape is obscured by mists and clouds, and affirms that all nature is smiling and the sun shining brightly is not an optimist; he is a liar."

115 Johnson Street, Brooklyn, N. Y.

THE BINET-SIMON TESTS OF INTELLIGENCE.

By B. F. Kuhlmann, Director of Research, Minnesota School for Feeble-Minded and Colony for Epileptics.

To devise tests by means of which the intelligence of any individual could be accurately determined has been the effort of psychologists for many years. Binet-Simon tests, though having received quite suddenly the attention of the whole educational public, were the results of a score of years of investigation. Their publication as a more or less complete system of tests for all ages of children, was undoubtedly crystallized by the authors' need of such a system in their practical work of eliminating mentally subnormal children from the regular classes in schools of Paris. As such they appeared first in 1905, but were much revised in 1908. The 1908 series at once gained the attention of psychologists throughout the world, and in the following two years the tests were tried out on thousands of children in Europe, England, and America. The immediate result was a wide advertisement as to their practical usefulness, and many criticisms and suggestions for improvements. This led the authors to publish a further revision in 1911. This much alone of their history will suggest that the Binet-Simon tests are not a finished or final product, but only a prominent stage in the development of a method and means of objectively and accurately measuring human intelligence. It is a stage, however, that is prominent not alone because it represents a sudden progress to a point where intelligence tests have become highly practical in their application, but also because of the impetus their practical usefulness has given to renewed and more extensive investigation of the problem of mental testing. Scores of psychologists are now at work studying the Binet-Simon tests, still further testing their value, or attempting improvements and extensions, because their success has demonstrated possibili-

ties in a task that was to many beginning to seem hopeless.

The Binet-Simon tests are a series of simple things that the child is asked to perform. These things, or tests, are arranged in a series of increasing difficulty as found by the abilities of normal children of different ages to perform them. They are, further, grouped into groups of five for each age. Thus, there are five tests for three-year-old children, five for four-year-old children, and so on, to the age of twelve and fifteen. In practice a child of any age, say of six, is given these tests, beginning with a lower age-group, up to a point where he no longer succeeds in passing any. The average child of six will pass all the tests in age-group four, and five, fail in one or two in age-group six, and in all five tests in age-group eight and beyond. With such a scoring the intelligence is graded in terms of "mental age." The child is given the mental age of the age-group just below the one in which he begins to fail in one or more tests, plus one year for every five tests in which he passes in all following age-Thus, for all average normal children the age and mental age should be the same. A feeble-minded child of ten may have a mental age of only five, which then means that he has a mental development equivalent to that of the average normal child five years old.

The authors originally intended the tests for use in examining school children from about three to twelve years of age. The 1908 scale of tests stops with tests for thirteen-year-old children, it being assumed that, so far as intelligence in itself is concerned, mental development is completed by about that age. But it can be readily seen that their use need not be limited to school children, and it has not been thus limited. They have been made

use of in as many as six different fields. These are: (1) public schools; (2) schools for feeble-minded; (3) reformatories; (4) juvenile courts; (5) recruiting stations for army and navy; (6) immigration offices. Their applicability in these different fields is not limited by the age of the persons to be examined, but by the grade of their The more nearly the intelintelligence. ligence approaches normal maturity the more complex the mind becomes, and the more individual variation there is with reference to special aptitudes and weak-Consequently it becomes more difficult to accurately measure the higher mental ages than it does the lower. Furthermore, since the tests stop with the age of thirteen, a normal twelve or thirteen-yearold child, or an older person with an intelligence corresponding to this age, will not have an opportunity to pass extra tests beyond these age-groups in order to attain the mental age of twelve or thirteen. This affects even eleven-year-old children in some For these two reasons the tests cannot and are now recognized not to measure as accurately for mental ages beyond ten as they do for lower mental ages. Many examiners have made grave mistakes with the tests and are still making them because they do not realize this fact. These have occurred mainly with reformatory and juvenile court children, where boys and girls from ten to eighteen years with mental ages frequently from one to three years below average normal have to be dealt with. In the hands of a properly qualified examiner this defect does not eliminate the usefulness of the tests in these fields, because they are still applicable for the accurate determination of the lower grades of intelligence whose exact nature usually escapes detection otherwise. They have at present only a limited use in detecting mental defects among immigrants because they have not yet been adapted and standardized for use in the different languages. To make this adaptation and to standardize them for the different languages is a large task, but it should not offer any insurmountable difficulties. They have at present their largest sphere of usefulness in the public schools, and in the schools for the feebleminded.

As in the case of many other efforts to apply the results of science in practical life, the use of the Binet-Simon tests has led to popular criticisms, which although erroneous because the tests are misunderstood,

do much harm in preventing their more extensive use in fields in which they could be of the utmost usefulness. Some of these are recurrent and persistently made, and were in fact first made by psychologists The more prominent among themselves. these are (1) that the individual tests too often give wrong results; (2) that the influence of special training or lack of it too often determines whether a child will pass a test and not his real intelligence; (3) that the mental ages obtained with the tests often contradict what is known of a child from general observation and especially from his These criticisms have been school work. answered. The individual test does often give a wrong result in the sense that a normal six-year-old child, for example, will often fail to pass a test in age-group six, and even in age-group five. Likewise, he will often pass a test in age-group seven, and even in age-group eight. But only about sixty-five per cent. of normal sixyear-old children should pass any one test in age-group six, and likewise for the other ages and age-groups. If they do this the mental ages obtained will be correct. This follows from the fact that any child is not tested alone by the tests in his age-group, but also by the tests of preceding and following age-groups. The rule for counting up the mental age from the scorings on the individual tests is an important and essential part of the system, and corrects for a considerable range of error that may be inherent in any individual test. The first criticism is, therefore, based on a misunderstanding as to what is required of the individual test. The second criticism is in a Special training or small measure valid. lack of it will sometimes cause a child to pass or fail in some individual test independently of his grade of intelligence. But this does not occur in the case of any one child for so many tests as to seriously affect the general result, the mental age. There are two general facts that prevent this. First, the tasks chosen for tests are of such a nature that every child has had abundant opportunity to learn to perform them if he has the necessary intelligence. They are the things that every child meets again and again. If he fails to learn them it is because of a lack of intelligence. Secondly, within certain limits, no child can be taught by special training to do a thing if he has not yet developed the intelligence that is involved in the performance of it. criticism entirely overestimates the importance of the amount of truth there is in it. As to the third criticism, it is also true that the mental age obtained with the tests is often at variance with the quality of the child's school work, and more frequently with previous opinions as to the child's intelligence. But this mere fact proves nothing. It is because we have always recognized that school work or opinion based on general observation are not adequate criteria of intelligence that we have felt the need of standardized mental tests that would be more accurate. We cannot now apply our old and recognized poor standard of accuracy to judge the accuracy of the tests.

The authors in devising the tests attempted to establish the degree of their accuracy in an entirely empirical way. This was by examining a large number of normal children with them and determining in what tryout measure the ages and mental ages always agreed. This method has been followed by others, and thousands of children have now been examined with these tests merely to further try out their accuracy. These and other results have led to the general conclusion now commonly accepted by students of the tests that the Binet-Simon system gives far more accurate knowledge of the intelligence of children than can be obtained in any other way. It has the additional advantage in the fact that this knowledge can be obtained in the case of any child in a relatively very short time, in forty-five minutes or so, in place of months or years of general observation. This conclusion, however, although sufficient to assure us of the practical usefulness of the tests, is not satisfactorily definite from a scientific standpoint. We want to know just how accurate it is, and at what points and in what ways it fails. The question at once divides itself into two quite different mat-The first question is how closely the average mental age as obtained by the tests agrees with the average age of a large number of children. What, for instance, is the average mental age of a hundred normal children all exactly six years old? The second question concerns the range and frequency of a difference between the age and mental age of such a group of normal children. How often will it occur in the case of a hundred normal six-year-old children that the mental age will be less than six or greater than six, and what is the maximum difference? The first question is relatively easily answered. Several investiga-

tors have obtained conclusive results showing that the tests measure on the whole too high by a fraction of a year for the lower ages, and too low by a fraction of a year for the higher ages. This amount of error, however, is insignificant as compared with the degree of accuracy we could possibly attain by any other available method. But the same results that show us this do not tell us much about the second question, which is the more important of the two. What we want to know first of all in the case of each individual child is the chance of error in the results of this individual testing. If we know that the results will be absolutely correct in ninety-five per cent. of the children tested it gives us a quite different assurance in the individual case from what is true when we know that the results will be absolutely correct in only seventy-five per cent. of the children. This knowledge gives us a measure of the frequency of error. Again, we might be quite satisfied with tests that gave absolutely correct results in only seventy-five per cent. of the cases, if we knew that the errors made never exceeded a certain small amount, say half a year. This knowledge would give us a measure of the range of error made by the tests. We have as yet no very definite knowledge as to the frequency and range of error made by the Binet-Simon tests, because we have no adequate means of knowing the exact grades of intelligence of normal children we may choose for examination for the sake of testing the tests. The real, correct mental ages of what we call normal children undoubtedly vary over a certain limited range for each age. When we get a difference between age and mental age in the case of any child we never know how much the difference is due to the intelligence of the child, and how much is due to errors made by the tests. To test the tests implies that we have already an accurate method of determining the intelligence of children, which we have not. There seems to be no direct method of solving this problem. But there are indirect ways. Various improvements for the tests have already been suggested, which we know will decrease the frequency and range of error, and these will undoubtedly multiply, and as these improvements are carried out evidence of the degree of accuracy of the tests in this respect will accumulate.

One of the most striking and useful features of the Binet-Simon tests is that it grades intelligence in terms of mental ages

instead of in terms of some arbitrary scale that would be intelligent only to experts. The mental age of a child gives the layman a fairly definite idea as to the child's mental abilities, for he has a fairly definite idea of what a normal child of any given age can do. Yet it is in this connection that a serious misconception exists almost universally outside of a few psychologists. The mental age alone indicates the present abilities of the child, his present stage of mental development, but it does not by itself indicate the inherent capacities for development. children each with a mental age of six, but varying in actual ages from six to fifteen would have widely different inherent capacities for development. The youngest would be an average normal child, while the oldest would be a middle-grade feeble-minded. The mental age of the youngest would increase a year every year; the mental age of the oldest would remain practically or entirely the same. Likewise, the difference between the age and mental age does not alone indicate the inherent capacity for development. A twelve-year-old child with a mental age of eleven, is much more nearly average normal than a six-year-old child with mental age of five. This seems to be the resultant of two factors. First, the normal rate of mental development decreases with age. A year's mental growth at twelve is much less than it is at six. Secondly, a child who is developing at a rate slower than the average normal rate will fall behind a little every year, the amount accumulating with age, although his inherent capacities for development have remained the same all the time. It has been only within the last year that it has been suggested that the fraction obtained by dividing the age by the mental age gives a much truer indication of the child's capacities than does the mental age or difference between age and mental age. Thus, the following relations between age and mental age all represent the same capacity, the same true grade of intelligence, because they give the same fractions.

It remains to be seen whether this measure of intelligence can be regarded as always accurate enough to be satisfactory from both the practical and the scientific standpoint. But it is an important advance to clearly understand that the tests give two, not one measurement. The mental age alone gives us a measure of the child's present abilities. It gives us his present level of intelligence, but does not indicate whether he is average normal, or how much above or below average. The mental age divided by the age gives us a measure of the amount his intelligence varies from the average normal. In the case of the mentally defective child it gives us the degree of his deficiency.

The Binet-Simon tests are now being used throughout this country and Europe, chiefly in the public schools. In some instances they have been adopted as a recognized standard method of measuring intelligence. In others they are still being tried out in an experimental way to determine the degree of their practical usefulness. It is hardly a prediction, but merely a plain inference, to say that mental testing, either with the Binet-Simon or similar system, as a regular procedure wherever the information as to grade of intelligence is desired, is an assured fact for the near future. Misunderstandings, and failure to employ qualified examiners in the use of the tests, which is at present the rule, may retard progress towards this end, but can hardly eliminate mental testing as a passing illusion of a long-sought-for object.

ON VISITING THE SICK.

Do not ask them how they feel. It is an insult to them, for if they felt well they would not be sick, and it is also a reflection on your intelligence, for if you would look around a little you would be able to see how they feel. Be of some service and cheer (if possible) and get out. There is a time later when folks need company, but sickness is essentially a non-social occupation. It is a merit to visit the sick when you help them, but to beat them over their enfeebled heads with your robust personality is a peculiarly careless crime.—Collier's.

AUTOMOBILES AND NERVES.

By Charles D. Musgrove, M. D., Penarth, South Wales.1

When autocars took the place of horseflesh as a mode of motion and the world began to move more rapidly in consequence, we all rejoiced to think that we were to have more spare time in which to enjoy all the advantages of recreation. After ten years of this new method of travelling, some of us pause to consider as to whether we are any better off than before in the matter of health and enjoyment, as whether in fact we are not rather the worse. We have certainly had more time to spare, but are inelined to think that we are somewhat like the man who fell over the cliff, when he meant to climb down it; he reached the bottom more quickly but was not good for much when he got there.

We too have discovered that even though our day's work is shortened, by the time we find ourselves with nothing to do we are too tired to do it.

Autocars have enabled many people to get through more work in a given time, there is no denying. But they have robbed mankind of one element which is a prime necessity as regards health. That vital requirement is rest, both during work and after it.

Rest is not simply a question of inaction or oblivion, but of change also. In order to save us from breaking down, nature has interposed many inevitable interruptions in the course of our lives, in the shape of hunger and the desire for sleep. Otherwise we should all run ourselves to a standstill, in the same way that the life of an automobile would be a short one, if it were used incessantly without any time for overhauling or The constantly recurring interludes in the form of mealtimes and sleep are the breathing spaces which are the salvation of our nervous systems. So far from being a waste of time, these breaks are as essential as food itself. It is they which re-vivify us, re-create us in fact. Recreation is not merely a matter of games or other forms of pleasure; the essence of it is change.

It is just here that automobiles have done the damage, by eliminating many of the changes which formerly took place in daily life and work. The man who once went to his office by train or electric car, or better still on foot, if distance permitted of it, now steps into his car and is whirled straight from his own door to his place of business. The result is that he flies past the interesting little details of life, which previously changed the current of his thoughts. His mind is now occupied with thinking of his work, if he is not agitated by the dread of an accident, which is worse still. Previously his brain was refreshed by a score of diverting incidents by the way, friendly discussions with his travelling companions and all the by-play which goes on in the stream of life. As a man said to his partner, when chaffed by him for walking to the office instead of using his car, "It's all right. You got here sooner than I did, but you missed a magnificent dog-fight."

Even if such luxuries do not always come our way, there are other diversions to be obtained en route by the man who travels in company with others. Where once a man used to enjoy a chat with his acquaintances twice a day, on his way to and from business, he scarcely sees any of them now, save the friends with whom he is on visiting terms. And the friends of our own choosing, welcome as they may be, are too often those who think very much like ourselves. They do not always refresh us in the same way as chance acquaintances, with their different outlooks and points of view.

Work itself has become more concentrated and harassing nowadays. If a man has to leave his office in the course of the day to interview someone in another part of

¹ Author of Nervous Breakdowns and How to Avoid Them.

the town, he steps into a taxi and is whisked there and back, instead of going by the electric car, or being quietly bowled along in a hansom. This may save time in the immediate present, but what of the future? Too often the nervous system is called upon to pay. The man has been deprived of a breathing space, which would have given his mind a much-needed rest.

There is even more than that in it. The worst feature of motoring is the sense of useless, unnecessary hurry which it inculcates. As people sit in a car, all they want is to get to their destination, regardless as to whether there is any need for haste or not. When they step out of it, this feeling of hurry is still with them, so that they rush at their work with needless speed and worry. No matter how smoothly an autocar may run, it seems to have a disturbing influence on the nervous system. Apart from the habit of looking out for obstacles and other risks, the fact of objects flying past the vision bewilders the brain. When travelling by tramcar or train the objects fly past also, but the effect is not the same, for the passenger can fix his gaze on the interior of the carriage and this is relatively stationary, so far as he is concerned.

This sense of hurry invades the hours of leisure also. Compare a man who arrives home in his autocar with one who has travelled in some other way. The former is often restless, unable to sit down quietly and take the repose he is in need of. Golfers too have told me that if they motor to the course, it takes them some time before they can settle to their game. For the first few holes they tend to press and hurry, not only when playing the strokes but between them also, rushing after the ball as though they were afraid it would run away from them.

Now when a man finds both his hours

of work and those of leisure disturbed by this feeling of unrest, he is on the road that leads to a breakdown. He is overworking a nervous system which is in the worst possible condition to withstand any strain.

What is the remedy? Automobiles have come to stay, but that does not mean that we are to make ourselves slaves to them. We are bound to use them on occasion, but we should all be the better for travelling in some other fashion when circumstances permit.

One morning a man found that his car was in need of repair. So he had to go by train instead. On the way he had a most interesting chat with an old acquaintance whom he had not seen for months. Previously they had been wont to travel together morning and evening. As they parted at the terminus, the other remarked, "This has been a treat. Let us hope that your car will break down every day in future."

That same afternoon the man had arranged to go for a picnic with his wife and family to a country spot some fifteen miles away. As his car was not available they had to go by rail. On their return they had to wait for half an hour or so at the wayside station for the train. It was a lovely evening and the landscape lay bathed in the mellow light of a rich sunset. Peace lay over all the land, and as the man strolled about with his wife and children, feasting his eyes on the beauties of nature, his mind was imbued with a sense of repose it had not known for months. Like his acquaintance of the morning, he began to think that it would be a good thing if the car was hors de combat every day.

If autocars only broke down more frequently, they might save many nervous systems from undergoing the same experience.

A SURGEON'S PRAYER.

Oh Lord, now that this day is over, grant me the gift of sleep. Watch over my ligatures and may the peritoneum do its duty. Let me not be envious of the success of the men who work harder than I do. Endow me with humility so that I may change my methods for better ones. May my mistakes give me more concern than my successes. And oh, Lord, keep my

conscience awake even when my intellect nods. Lead me not into the temptation of fee-splitting. Permit me to rise early, oh Lord, making one less mistake each day. Deliver me from the too-long-delayed operation, but grant me strength to do my duty no matter what my mortality statistics may be. For all these and the chief blessing of work, I humbly ask, Amen.—L. M. K., New York.

A FEW FACTS ABOUT SUGAR.

Dr. Axel Emil Gibson, Los Angeles, Cal.

WITHOUT possessing the fatal fascination of a narcotic, sugar attracts the human race more than does any other element of the dietary. And though it may appear strange yet statistics all agree, that there exists a positive relation between a people's demand for sugar and the standard of its culture.

Hence, it will not be surprising to find the Anglo-Saxon at the front of the world's armies of sugar eaters. The statistics of the United States Government, collected in the year of 1910, state that the average citizen of this country and of Great Britain consumes yearly more than half his own weight, or 80 lbs. per capita. Next in the line of sugar-loving culture people come Denmark, Sweden and Norway, with their respective 70 and 65 lb. per each average man, woman and child. Then follow Germany, France and Holland with their tribute to the Monarch of the Palate at the rate of some 50 lb. each;—while at the end of the list we find Italy, Greece and Turkey with a sugar consumption of somewhat less than 23 lbs. per head. Last year's consumption of sugar in the United States alone exceeded 7,000 millions of pounds!

HAS THE POPULARITY OF SUGAR A SCIENTIFIC BASIS?

This popularity of sugar, especially among nations where the tide of culture touches its high-water mark, has its cause and explanation in the readiness by which it gives off a maximum of energy with a minimum of bulk. The tension of modern life with its prodigious expenditure of muscular and nervous energy demands a quick combustible to facilitate rapid metabolic exchanges. Such a combustible, or ever-ready generator of muscular and nervous energy, is found in sugar. Suspended in its bosom is held storage-batteries of incalculable powers, ready to be discharged in response to physiological needs and necessities. But the relation between the demand and the supply, in order to produce nutritionally safe results, must be metabolically balanced, and in vital accord with physiological and biological principles.

Through the culinary excesses in modern living, we have ruptured the chain of vital reciprocity by which Mother Nature relates herself to the entities of universal evolution. The ingenuity of the human intellect, stimulated by a selfish desire to gratify an undue and unnatural craving for extracted and concentrated relishes, has devised expediences by which nature can be "held up" so to speak and coerced to yield gustatory sensations in excess of the powers of digestion and assimilation. One of the strongest, and at the same time, most serious temptations in the life of an individual, lies in his natural, but over-indulged and hence over grown desire for "sweets," not only on the physical plane but, as a moral attitude—on all planes.

This craving for sweets, experienced more or less by every creature of evolution, has a deep meaning in the unfoldment and maintenance of life and growth. The function of sugar in evolution, unique and fundamental, is to charge the cells of every entity with a vital force of structural rejuvenescence. Introduced into the system in its natural combinations of fruit and vegetable, it starts chemical reactions in the responsive glandular functions, from which arise those unorganized, vital enzymes, which are the basic elements in all successful digestion and nutrition.

A physiological combustible of highest order, sugar, when entering in excess the nutritional and digestive processes of the system, releases alcohol and carbonic acid gas to the verge of cellular intoxication. As the effect on the system to some extent is similar to that experienced through the indulgence of alcoholic beverages, it is readily seen why there should be felt a general craving for sugar in our strenuous, highly intellectualized, nervously overwrought world of to-day. There is a constitutional need for stimulation,—for the nervous bracer,-resulting in the quick ganglionic shock from the cerebral spinal dynamo, lashing a jaded nervous system into temporary sensuous response.

There is a vast difference however between effects due to excess, and those arising from a balanced dietetic enjoyment. The eternal fitness of things is pivoted on constitutional adaptation and self-conscious restraint. Moderately consumed as in fruits, honey and unfermented juices, sugar in its effect is a food; while in excess, as extract or distillate,—in the form of candy, jelly, syrup, etc.—it becomes a nerve-lashing intoxicant.

It is thus readily seen why the creatures of evolution should worship at the shrine of this powerful, ever-present, nutritional The engines of life—the instimulant. numerable cells of the organism—are kept in action through the combustion of the The energy liberated in sugar-molecule. the organic combustions of this persuasive element is instrumental in raising the whole organic world into levels of progressive unfoldment of power and substance. It constitutes the Atlas of the biologic cosmos, maintaining the nutritional and physiological balance of organized existence.

The fact that no natural sugar occurs without being atomically balanced by carbon, leads us to the conclusion that its composition (the accepted formula of which is $C_6H_{12}O_6$) is an atomic or ionic charge of H.O., held in chemical sequence by the carbon envelope. Brought in touch with organizations that demand sugar for their growth and sustenance, the affinity evolved through the interaction of the different elements, may rise to an intensity, overcoming the controlling power held by carbon over its compound. This transition of the sugar molecule, from its carbonic envelope to the nutritional cell of an organism, through the process of affinity, constitutes the basic principle and governing condition in the entire chemistry of nutrition. In other words, chemical affinity, in its action on the digestive and assimilative processes brings into play the principle of supply and demand in the field of physiological economy.

The physiological value of sugar depends upon the character of its origin—whether naturally or artificially obtained. With natural sugars we mean the natural sweets, constitutionally present in fruits and vegetables before they have become subject to the processes of extraction and concentration, demanded by the jaded sensibility of an over stimulated and hypertrophied appetite.

At the head of the natural sugars stands Grape-sugar or Dextrine, introduced by its carbon envelope in the form of a saturation-compound, forming a complete selfbalancing molecule under the chemical formula C₆H₁₂O₆. By this is indicated that Dextrose stands for a complete, integral, permanently self-sustained compound, in which carbon with its four valencies or powers of affinity, redoubled or re-enforced six times, is adequate to hold in a firm grip the single unit-power of the Hydrogen molecule, doubled 12 times, and the two-armed power of the oxygen, doubled 6 times. Or in other words the valency or affinity of carbon amounts in power to the combined valencies of Hydrogen and Oxygen—viz:

Oxygen $2 \times 6 = 12$ Hydrogen $1 \times 12 = 12 - 24$

Carbon $4 \times 6 = 24 - 24$

The formula governing this compound comprises the whole group of natural sugars, such as Grape-sugar, Fruit-sugar and Monosacharides. Complete, chemically satisfied,—with every atom of the compound structurally engaged, the formula $C_6H_{12}O_6$ introduces nature's own method of supplying her creatures with energy adequate to meet the needs and conditions of a complex evolution. Hence the congenial and energizing influence of fruit, vegetables, milk and honey on the systemhaving the quality to combine taste with virtue, impulse with permanence, and stimulation with normal growth.

So far so good. But while the power of Nature to maintain the working standard of constitutional health, has its seat and condition in a normal physiological balance of natural salts and sugars obtained from the fruits and vegetables—yet, however, to meet the exigencies of obverse environments and abnormal situations, nature in her ever present resourcefulness, often takes recourse to abnormal means. Thus in the great vital economy of existence, what may stand for unhygienic and illogical food-combinations under one set of conditions, may under the stress of reverse conditions constitute the very means necessary to restore a disturbed physiological balance. We may therefore find, that in the countries of the north, where fruits are scarce or absent, a moderate indulgence in extracted sweets is not only nutritionally tolerable, but even necessary. Jellies, jams, and fruit-preserves in general while in themselves, practically speaking, are mere dead and embalmed fruits-are nevertheless under certain conditions valuable carriers of muscular and nervous energy. To the extent, however, that nature is adequate

to supply our dietary directly from her own faultless cuisine—where the sun does the cooking and the earth the seasoning—any procedure to stimulate taste and appetite by artificial mixtures, will result only in invoking the Nemesis of a disordered stomach and liver. Only in regions where nature is barren and fails to meet the demand of our system for a balanced nutrition, are we justified in preparing artifici-

ally, the required food-supply. The employment of sugar in the preservation and seasoning of fruit has a logical and hygienic basis in the fact that sugar is a natural ingredient in fruit, being one of its main, and vitally indispensable elements. With perhaps the exception of the lemon, all full grown and perfectly ripe fruits are sweet and congenial both to the palate and to the gastric juice. When on the other hand the fruit has had an incomplete ripening, owing to insufficient exposure to the sun, or to an excess of humidity in the air or soil, or perhaps in most cases to premature picking—its acidity has had neither the time nor conditions to accomplish its evolution to a natural sweetness. To avoid the corrosion which this unmodified acidity may have upon the lining of a sensitive stomach and intestine it may be advisable to artificially increase the sugar percentage of the fruit-with or without cooking. This sweetening of the fruit tends to balance up its deficiency of sugar, and by a neutralization of its acidity, bring about an arbitrary—though under the circumstances, - an hygienically defensible ripening.

But while "free" sugar may thus have a field of usefulness in its relation to fruit, the same principle does not hold good with regard to sugaring of vegetables and cere-In the natural ripening of the latter, sugar is of a subordinate importance, as the end product of grain is found neither in sugar nor acid—as in the fruit—but in fats and proteids, which so far from requiring artificial sugar for their ripening and assimilation,-their very treatment by sugar causes a surcharge for which there is no constitutional need. Unable to accommodate to the expansive force generated by the abnormal increase of its sugar percentage, the cells of the starch burst under the strain, and through their molecular rupture invite the action of bacterial decomposition and subsequent generation of gases, destructive to health and life.

From this it is readily seen how a number of dishes of most incongruous character, jumbled together without reason or season to make up a single meal, means a hit-or-miss game, with the stakes made up by man's greatest physical possessions—health, strength and usefulness;—with life itself as its last risk. Hence while an occasional accommodation in our cooking to the craving of artificial sweets may at times have a congenial effect upon human nutrition-in ten cases out of twelve, the venture is disastrous. It is only in emergencies, when fresh, ripe fruit is inaccessible, that recourse should be taken to fruits artificially preserved and made palatable.

SUGAR AS A STIMULANT.

As a gauge of tolerable accuracy we may classify natural sugars as foods, and artificial sugars as stimulants. And while the direct and immediate action of the two sugars may appear to be identical, their remoter effects on the system, are altogether different. Thus the stimulation derived from natural sugars has its basis in the rapid but homogeneous unfoldment of the integral force-units contained in the molecular balance and nutritional completeness of the natural compound; while the stimulation due to artificial sugar assumes the

bling the motion imparted to a derailed vehicle from the forcible contact of an assisting motor. In the former case the motion is self-generative,—the resilience of released constitutional energies, organized and made permanent; -in the latter it is the action of transfused force currents, induced from without in place of being generated from within. The one identifies itself with the system as a permanent, selfsustaining force center-the other represents the action of a whip on a tired out horse, which however may be instrumental in saving both the horse and driver from a character of a mechanic impulse—resem-threatening collapse.

Digitized by Google

THE LATEST RESULTS OF SCIENTIFIC EXPERIMENTATION WITH REGARD TO THE VALUE OF SUGAR.

As a sum total of the experiments carried on in the various laboratories and experimental stations throughout the world, concerning the character of free sugar as food, we find the following statements as generally accepted points of agreement.

First—When the organism is adapted to the digestion of starch, and there is sufficient time for its utilization, sugar has no positive advantage over starch-foods, in supplying muscular energy during a protracted period of labor.

Second—The positive advantage of sugar over starch lies in the fact that it furnishes the needed carbohydrate material for organisms, that have as yet only a little or no power to digest starch. Consequently in the extract or "free" sugar obtained from milk (sugar of milk) the infant has a valuable asset in the composition of his diet.

Third—In time of great exertion and under the strain of exhaustive labors,—child-birth may be counted as one,—the rapidity with which sugar is assimilated gives it a certain advantage over starch. Its rapid conversion or translation into heat or energy, creates a flush of exhilaration and sense

of available strength, which may suffice to carry the individual over the critical moments of stress. It is this rapid-firing power of the sugar with its swift systemic invigoration that makes sugar so highly relished by people of high-strung, emotional, nerve-exhausting temperament. is this quality of force in the sugar which is instinctively recognized and coveted by the nervous, the irritable, whose main expenditure lies in loss of energy. The use of "free" sugar, when applied to stimulate sluggish currents of energy, and raise them into higher levels, has a striking similarity to the starting of a quick fire by throwing cotton or coal-oil into a stove. The evolution of heat is instantaneous, but of only passing permanence; while the injury wrought to the stove may be permanent. On the other hand we may readily see, in the light of the illustration, how in using sugar for the purpose of modifying the hyperacidity of imperfectly matured fruit, we gain the same advantage as by using a rapid firing material in connection with, and to the aid of, the slow combustiveness of green, or incompletely seasoned firewood.

HOW SUGAR MAY BE MADE A SAFE OR UNSAFE ELEMENT IN OUR DIET.

Reports have lately come from experimental stations from all over the world, as to the great value received from sugar as a stimulating, revivifying agent. In the German and French Armies startling feats have been exhibited on a basis of free sugar as a physiological force,—equipping the soldiers with increased vitality and endurance to defy fatigue and hardships without the assistance of ordinary food. No less remarkable is its value as a therapeutic agent, especially in cardiac insufficiency. Dr. Hausch and Prof. Behrendes of Berlin, Germany, are enthusiastic over their suc-

cesses in sugar therapy, in diseases of the heart. Patients suffering from general debility have found in a judicious administration of sugar, a new source to energy and health. In most cases however the sugar solutions are medically prepared and administered hypodermically, as ordinary cane sugar was found incongenial to the assimilative functions, often in a large percentage thrown out from the system by the kidneys.

An incident which may shed some new light on the subject of sugar-therapy is reported from a Hospital in Edinburgh, Scot-

land. A patient afflicted with a severe attack of rheumatism had been advised by his physician to "cut out" sugar from his daily rations. In consequence the rheumatism was cured, but in the course of time symptoms of general debility and nervous breakdown began to show up. In his distress he returned to his old physician and asked for advice. Connecting the leaving out of sugar from his diet, with the new affliction, the physician, by way of experiment allowed him a certain amount of sugar daily. From the very start the patient showed signs of recovery, though the report did not refer to the fate of the old rheumatism.

These and other experiments all go to show that the human nutrition can be greatly affected, both for good and bad by the action of sugar. It is moreover in the very fact that sugar in its free form is an abnormal substance that it possesses value as medical agent, and which on the same,

distinctly and unmistakably points out its proper place in the human dietary. while its action as a chemical absorbent is of greatest value toward breaking up of accumulated tissue-poisons in the system, yet its further action on other tissues, viz. kidneys and liver, may and does give rise to remoter complications. The safer way to employ sugar as medicine is perhaps to limit its application to external tissues, as it must be carefully realized that the transition stages from sugar as food and force, to sugar as stimulant and poison is obscure and indeterminable, and safe to pursue only under the guidance of painstaking scientific experimentation. The very allurement connected with the taste of sugar endangers its employment and demands a double caution: to scrupulously refrain from its indulgence, either in the form of food, force or medicine unless prompted by motive of health and strength for the purpose of general usefulness.

A NEVER ENDING WARFARE.

THERE is, from the cradle to the grave, a constant warfare between the body and the germs of infectious disease. No matter how careful we are, all of us at one time or another are bound to get these germs, which doctors call "bacteria," in our systems.

Indeed, bacteria may be found on the skin and in the throat of many people at almost any time. That is the way pimples, boils, carbuncles, and erysipelas occur; such are in reality diseases for which the pus-forming germs are responsible. Bacteria also attack the walls of the throat and of the upper respiratory passages; and so result tonsilitis, sore throat, quinsy, the grippe and so on. The pneumonia germ is present in the mouth of many healthy people, who nevertheless don't come down with pneumonia; and it is the same way with the diphtheria and other germs. How, then, are such diseases ever escaped? The germs enter the body as unwelcome guests; and try to live board-free at the expense of their "host." Or they attack the body; try to get their food out of it; try to use it for a soil in which to grow and multiply, and cause disease by means of the poisons (toxins) they generate, which poisons spread through the lymph and blood channels and produce symptoms characteristic of the respective diseases.

To defend itself the body kills the germs; day by day and year by year the never-ending struggle continues, the bacteria constantly attacking, the body constantly fighting to keep them out. The toxins carried through the body by lymph and blood, cause sickness by poisoning the cells and tissues and organs. In most cases it is really not the germs themselves, but their toxins, that cause the sickness. The body destroys toxins by producing anti-toxins. The antitoxin does not kill the germs, but it does destroy their toxins; and thus are cells and tissues saved from being poisoned until in other ways the body can kill and dispose of the germs themselves.

But how does the body kill germs? If you should examine a drop of blood with a microscope you will find a great number of blood cells floating in the blood fluid. These cells are of two kinds; the red blood cells,

whose business it is to carry oxygen (the life-giving gas) throughout the body, their work being to kill bacteria; and the white blood cells.

A white blood cell approaches a germ and floats about it, or swallows it. Then the corpuscle tries to digest and kill the germ; whilst on the other hand the germ tries to grow in the corpuscle and use it for food, and as a soil to multiply in.

When the corpuscles are victorious the germs are destroyed and the disease stopped; but if the germs are too numerous and powerful the corpuscles are killed and the

disease goes on until the body dies.

Besides the white corpuscles the body has another weapon for its defense against germs-the germicidal (germ-killing) substance of the blood. There is always some of this substance (opsonin) in the blood of a healthy person; and when disease germs attack the body more of this germicidal substance appears in the blood and helps to "Opsono" means "I cater kill them. to"; and the opsonins really supply the white blood cells with sustenance, so that they may be fit for the battle they must wage. So it should be our constant endeavor to keep up the resistance of our bodies to germs.

Just as the seeds of the plants lie in the cold earth waiting for the warmth of spring to come, so germs often lie in the body waiting for a chance to grow. And the only safe way is to keep the body always in health and vigor; so that it may be able to kill

any disease germs that may enter it.

Overwork, exposure to the elements, to cold and to heat, wet feet, hunger, fatigue, worry, lack of fresh air and sunshine, lack of sleep, alcohol, too much tea-drinkingall of these factors injure the body, weaken the strength of the white corpuscles, and lower the germicidal powers.

It is everyone's clear duty to himself to keep his own body in health-to care for this precious body intelligently and carefully; to fail to do this would be no more sensible than for the soldiers in a fort to open the gates and lie down to sleep in the

midst of their enemies.

Professor John W. Ritchie, in his Primer of Sanitation, well observes that a wise general does not risk the fate of his army on a single battle line: but behind the first line of soldiers he places a second line; and behind the second line of defense he has still a third line, in case the enemy should break through the first and second lines.

So in our warfare with disease germs we must not depend on any one line of defense. We should (1) try to keep the germs from being spread about; (2) we should guard the gateways (the skin, the nose, the mouth) by which they enter the body; (3) and within the body we should maintain the de-

fenders at their post.

For sooner or later, just when we can never tell, our unsleeping enemies (the disease germs) will pass through the first and second lines of our defense; and if, then, the bodily health is low, and its defenders weak, we are likely to succumb, perhaps fatally.

IN THE YEAR 1913.

THE Honorable Stephen Coleridge is the son of Lord Chief Justice Coleridge, strange as it may seem, as the father was a very able and a very sensible man. The Honorable Stephen Coleridge is one of the best known of the English leaders of the anti-vivisection movement, and is also familiar to Americans on account of two trips over here. Here is the latest contribution to science by Mr. Coleridge that has fallen under our eye:

"Knowledge and reason have always been, and must always be, miserable bases on which to build conduct, character, and life. It is true that Science has conferred some benefits upon mankind; it has enabled the slothful to be more slothful, the

self-indulgent to be more self-indulgent, and the loquacious to be more communica-It may have, perhaps, prolonged human life by a few years, or even have kept alive some who had better be dead. But the accumulation of knowledge has no relation to the acquisition of wisdom or the conservation of virtue; and Science has no exhortations for us on the beauty of unselfishness, on the nobility of selfsacrifice, on the splendor of patriotism, on the sanctity of honor, or on the glory of God, and these things matter more to us than the origin of the species, the excretions of earthworms, the pressure of the blood in dog's veins, or the battles of bacteria."—Harper's Weekly.

RURAL SANITATION.

SANITATION OF A COUNTRY HOME. A LECTURE.

By H. BURDETT CLEVELAND.

Assoc. M. Am. Soc. C. E.; Civil and Sanitary Engineer; Principal Assistant Engineer New York State Department of Health.

It is generally recognized that residence in the country, away from the crowded conditions of villages and cities is conducive to good health. But such is not necessarily the case unless living conditions are sanitary, the water supply is pure and the domestic wastes are properly disposed of. Let us consider, then, the most important factors in the proper sanitation of a country home.

Most necessary to the health of the individual in any home is a pure and abundant supply of water. Strange to say, this important requisite of health has, in the past, been too often neglected in the country home. The well may have been located near a leaking privy, vault or cesspool, the curbing may not have been carried above ground when the well was located in low ground subject to surface wash and even barnyard or privy drainage may have reached the well waters; or the well may have been dug in shale or gravel directly in the path of the ground water flow which at some nearby point was subject to contamination from privies and cesspools and as a result the family has been suddenly stricken with typhoid fever.

Most fortunate are those country homes blessed with a water supply piped from a spring whose location is well removed from the possibilities of contamination so numerous near the house and barns. In the absence of such a source of supply great care should be exercised in the location and construction of the well. The site should be selected far enough from cesspools, barn-yards and privies, the distance depending on the porosity of the soil, so that no danger of contamination of the well waters by sub-surface flow will Precaution should be taken against the pollution of the well by surface wash, by raising an earth mound around the well curb, by carrying the curb a foot or more above this mound and making the curb and platform water-tight. It is often desirable to cement the cover and the sides of the well for ten or twelve feet below the ground surface in order that surface water polluted by infected material may not readily leach into the well.

From time to time well waters should be analyzed, remembering the old adage stated in a new form, that an ounce of precaution is worth far more than a pound of regret.

The greatest care should be exercised in disposing of excretal wastes. Where inside flush closets are not installed and outside privies must be maintained, they should be located at a considerable distance from the house and especially from the dining-room and kitchen. Removable water-tight boxes should be used for frequent removal of the wastes or tight vaults should be provided so as to keep out the common house fly,—a well recognized carrier of disease germs.

The location of all privies should be such that well waters may not be contaminated by drainage from the vaults or the cellars of houses and the soil surrounding the houses may not be polluted. Especial care should be taken to prevent such contamination where the soil is loose and gravelly or where underlying rock occurs, since the danger of transmitting disease is much greater under such conditions.

When a running water supply is enjoyed the liquid wastes from kitchen sinks and inside closets must be disposed of.

The inside plumbing should be watertight and of modern type. Each fixture, such as water closets, sinks, etc., should have separate water seal traps to prevent sewer gas from escaping into the house and each trap should preferably be separately vented by means of a pipe leading from the top of the trap to the main soil pipe or to a main vent pipe extending to the roof.

If the soil on the premises is well drained, loose and well ventilated, and the ground water level is fairly deep below the surface, we need go to no more trouble than to construct an ordinary dry walled cesspool, provided there is sufficient area to prevent soil contamination

near the dwelling, and provided there is no danger of contamination of wells. The surface indications of this latter danger must be supplemented, if possible, by a determination of the direction of ground water flow and of the fissures in the rock formation, if underlying rock occurs.

Even under the most favorable soil and drainage conditions, the cesspool may be constructed in a scientific manner, and then we may call it a septic tank.

Where the soil is heavy and impervious and it becomes necessary to abandon the common, loose walled cesspool or where for other reasons, a water-tight cesspool is required and the frequent removal of the contents is burdensome, the septic tank is the next development and under its well regulated operation the same biological processes which take place in the cesspool are fostered and encouraged to the fullest extent. The septic or settling tank settles out a large proportion of the solid matter in sewage and in the septic tank much of this is liquefied.

It is very often permissible, on sanitary grounds and with especial reference to the prevention of nuisances in streams to subject sewage to sedimentation or to septic action only before its discharge into a nearby water course. In this connection it should be remembered that the functions of supplemental treatment in sewage disposal systems in which the septic tank is employed, is to nitrify or oxidize the broken down compounds and products of liquefaction which are discharged from the septic tank. Now if the capacity of a stream with respect to its ability to digest or nitrify septicized sewage is sufficient so that such an effluent in given quantities may be cared for without the creation of a nuisance in the stream, the objects of sewage purification is accomplished with respect to one side of the question, if septic action alone is employed.

The other great necessity for the purification of sewage, the protection of water supplies, requires in general additional treatment of sewage over that accomplished by treatment in sedimentation or settling tanks and various means for additional treatment are discussed later.

It is usually desired that sewage disposal plants for institutions or country residences shall be covered and kept out of sight. For this reason what is termed a sub-surface irrigation system is more

generally used than any other in connection with the septic tank.

The septic tank itself may be entirely

underground.

We will take up the most effective and easily operated systems for sewage disposed for isolated houses, foremost among which is the septic tank system used alone or in connection with sub-soil filtration, contact beds, or broad irrigation.

Considering first the septic tank:

Septic tanks are constructed for individual houses on the same principles that the designs for municipalities are based. There should be a submerged inlet for the sewage and a submerged outlet for the effluent, in order to disturb as little as possible the crust which forms at the surface and the sludge which is deposited on the bottom of the tank. This allows the sewage to enter the tank at mid-depth, and permits the effluent to be drawn off from mid-depth, where the contents of the tank are the clearest and most free from organic matter.

The quantity of sewage to be cared for from any given residence is practically the same as the amount of water used in the house. This amount is variable, ranging from 25 to 150 gallons and upward per person, but the design of sewage disposal plants must be based largely on the organic matter in the sewage to be treated and consequently does not change materially for a given number of persons whether the water supply be abundant or restricted.

On the basis of a water consumption of from 100 to 125 gallons per capita daily, the character of sewage is such that the time of detention in septic tank necessary to effect a proper reduction of organic matter is from eight to twelve hours.

The size of a septic tank for an isolated house or institution may, therefore, be based on the foregoing data, if the water consumption is known or can be estimated.

The tank should be water-tight, from 4 to 6 feet deep and should have a capacity of from 3 to 5 cubic feet per person.

The entrance of sewage to the tank should be effected in such a way as to distribute the flow across the entire cross section in order that every portion of the tank may be effective. This may be accomplished by a separate entrance chamber from which the sewage flows over a wall across the entire width, or by extend-

ing a pipe horizontally across the end of the tank into which the sewage is delivered by the house sewer, and from which it emerges through various openings. This is the usual method, since a grit or detritus chamber is not necessary for small plants.

The flow through the tank should be continuous and the velocity should not be greater than from 1 to 3 inches per minute. Within certain limits, the velocity of flow does not affect the reduction of sewage as much as it does the rate of deposit of sludge, and the lower velocities seem to produce a smaller accumulation of sludge in the bottom of the tank.

Where septic tank treatment alone is necessary, the flow from the tank is continuous to the point of discharge at the stream. But where subsequent treatment is necessary, the effluent from the tank should generally be collected in a discharging or siphon chamber, so that it may be discharged intermittently into the contact bed or into the subsoil pipe system.

We will now take up that method of secondary treatment which is most common and, in general, most feasible,—the subsurface irrigation system. The successful operation of a system of subsoil drains depends almost entirely on the character of the soil. Sand is the best filtering medium. But a light, sandy loam, or a gravelly soil, will care for a septic tank effluent.

The effluent from the dosing chamber is delivered into agricultural tile drains or sewer pipe laid with open joints in parallel lines one foot or so under the ground surface.

The absorption area selected is generally on a slope with the main tile drain discharging into branches which are laid at right angles to the slope or parallel with the contours.

In some soils it is necessary that the main effluent carrier shall be laid with cemented joints in order that the effluent may be turned on alternate days into different sections of the subsoil system. If the absorption area is naturally well-drained, the effluent will seep away into the soil and need no further care. But it is sometimes necessary to prepare the area by constructing under drains beneath the subsoil system, or blind ditches or drains around the lower sides of the plot.

The total length of subsoil piping is dependent on the porosity of the soil. The length of each system, or of each section of subsoil piping into which the dose from the dosing chamber is to be discharged, may be somewhat less than that required to receive the full dose, since during the discharge some of the effluent escapes through the open joints of the piping.

Another method of subsequent treatment employed where area for subsoil systems is not available, or where the soil is heavy and impervious, is to treat the effluent in what are known as contact beds.

The fundamental principle of contact beds is to furnish a medium on which aerobic or nitrifying bacteria may exist, and carry on their work of consuming organic matter and thus reducing complex organic compounds to simple and harmless substances.

The media employed may be broken stone, coke, gravel, furnace slag, clinker or broken brick, depending on whichever is most easily obtained.

The action is not that of mechanical straining primarily, but of biological activity. However, the material of the filter must sometimes be renewed or, washed.

The area required for a depth of, say, four feet should be on the basis of 500,000 gallons per acre per day, if the effluent is applied without any special attempt at aeration.

In order to supply oxygen to the bacteria, the beds should be dosed intermittently from a separate chamber and the effluent distributed in as short a time as possible over the entire surface. The discharge from the beds should be sudden and regulated so as to empty the beds quickly after the beds have been filled for a sufficient time for the bacterial action to take place, generally one to three hours.

The foregoing description is that of the fill and draw contact bed system which is rather expensive and not generally employed for small installations.

A better system for the isolated house or institution where a subsoil system cannot be employed, is a trickling or percolating filter. The sewage is discharged in this case by means of troughs or possibly by sprinkling nozzles onto the surface of the beds, and percolates down through the filtering material into an underdrain from which it is discharged into the stream.

The most economical type is the continuous trickling filter which does not require either a siphon or sprinkling nozzle for the application of the effluent to the filter or a timed siphon for the discharge of the effluent from the filter.

A third stage is sometimes introduced, known as sand filtration. The effluent from the contact bed or percolating filter is distributed over a three- or four-foot bad of cord for final purification

bed of sand for final purification.

The rate of filtration in sand beds of septic effluent should not exceed 200,000 to 300,000 gallons per acre per day, but may be in excess of this if contact or percolating filters are also employed.

One of the earliest methods of sewage purification was that of broad irrigation, sometimes conducted in the way of sewage farming. This method is especially applicable to isolated locations, where plenty of area is usually available. this system the sewage is applied directly to the land without previous treatment. A comparatively large area is necessary, since it is found that ordinary soils will not absorb sewage if applied in greater quantities than about 10,000 gallons per acre per day. The sewage is generally delivered in furrows on sloping land. If use is made of the sewage as a fertilizer, those vegetables which are not to be eaten raw are grown on the ridges between the furrows.

Sand filtration without previous septic treatment will care for sewage at the rate of 60,000 to 100,000 gallons per acre per day only. These last named methods of broad irrigation and sand filtration require much oversight and are not, therefore, as applicable to individual installations as the former processes named.

It should be borne in mind that sewage disposal plants to care for the domestic sewage of individual families are subject to different conditions than obtain in the case of municipal plants. There is less uniformity in both the character and the flow of the sewage and the proper design should take these facts into account. In cases where the problem of sewage disposal is at all difficult, expert advice should be sought in order that the principles of sewage purification may be properly applied and considerable difficulty and annoyance saved thereby.

Considerable attention has been given of late to the transmission of disease through the agency of flies and it is hardly necessary to call attention to the need of preventing the accumulation of stable manure and rubbish heaps near dwellings. The importance of cleanly, sanitary surroundings in this respect has been emphasized in many instances and their importance in protecting health cannot be overestimated.

We have considered thus far the disposition of wastes on the ground surrounding the house. It must be remembered that the waste from the lungs in the air we breathe out constitutes as well a menace to health and for this reason the greatest attention should be given to the proper ventilation of living and sleeping rooms. Do not be afraid of fresh air and lots of it. Keep the windows open in winter as well as in summer and wear an ulster if the last coal bill is unpaid. To keep up the physical tone of the body by providing a proper supply of oxygen in the house is to cheat the doctor and the undertaker, and who would not do that.

Finally, stand off and criticise the sanitary arrangements of your own house and grounds as though they were your neighbor's and in all probability you will find several things to do.

Synopsis of Lecture.

Life in country normally healthful but not necessarily so unless:

(a) Living conditions are sanitary.

(b) Water supply is pure.

(c) Domestic wastes are properly disposed of.

Water Supply.

Necessity of pure and abundant supply. Too often neglected.

Well may have been located:

(a) Near cesspool.

(b) Subject to surface wash.

If pure spring water is not available, well should be:

(a) Located remote from cesspools, barnyards and privies.

(b) Constructed so as to prevent leaching and surface pollution.

Water should frequently be analyzed. Disposal of excretal and domestic wastes.

Percolating filters: Construction.

Operation.
Sand filtration:

Description. Broad irrigation:

Applicability and limitations. Necessity of careful design of individual sewage disposal plants. General Sanitation:

Manure and refuse heaps.

Ventilation.

Outside privies:

Location.

Construction.

Maintenance.

Plumbing.

Disposal of sewage:

Cesspools. Location.

Construction.

Methods of scientific disposal most applicable to a country home.

Septic tanks:

Function.

Design.

Construction.

Sub-surface irrigation:

When applicable.

Description of system.

Design.

Contact beds:

Function.

Construction.

Operation.

EFFICIENCY NOTES.

"There is some good in every man, much good in some men, infinite possibilities in all men."-E. E. Dodson.

"The man who lacks the courage to make a start has reached his finish."

"It is good to be gratified but dangerous to be satisfied."-Sheldon.

"Preparedness is the practical secret of success. Without it, opportunity means little."

"The men of action are, after all, only the unconscious instruments of the men of thought."-Heine.

"There is more lost by indecision than by wrong decision."

"The indefinite idea produces the indefinite action. The uncertain man produces uncertain results."

"The average man cries for better opportunities; while the fact is that he is literally surrounded with better opportunities but has not fitted himself to make good in any of them."-C. D. Larson.

"Half-way knowledge is all right if you want to go half way to the goal of success."-W. C. Holman.

"Preparation is a safer guide than luck or inspiration."—Creelman.

"Impossibilities are merely the halfhearted efforts of quitters."—Herbert Kaufman.

"Responsibily gravitates to him who can shoulder it."-R. L. Stevenson.

"Few of the things that come to the man who waits are the things he has been looking for."—Bishop Manning.

Alas for the poor fly! He has few friends nowadays. One of the last to be kind to him was the dear old Countess of X. "Julia," said her ladyship, who noticed one buzzing round the window and giving himself a headache butting the glass. "Julia, open the window and let that poor fly out." "But, madame, it is pouring rain." "You are very thoughtful, Julia. Show the fly into the ante-room and let it sit down till the shower is over; then let it out."—Baltimore American.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

Leisure Hour was founded in the belief that the physician is but human; that he loves the beautiful in thought and sentiment as expressed in literature, and that he is at times surfeited with technical matter. Short, crisp contributions on any of the subjects named in the sub-heading are invited to this department.

ANCIENT SYMBOLISM OF THE CAT IN FOLK-MEDICINE AND OTHER FOLK-LORE SURVIVALS.

By Lewis Dayton Burdick.

How and when the cat came to be associated with, and regarded as a symbol of, the moon are questions which can only be answered by evasion. They belong to prehistoric time and may have antedated the earliest settlements in the rich valleys of the Nile and the Euphrates.

Mäu, the Egyptian for cat, signifies light, and was at one time known to have been the symbol of the sun-god. The cat was held as sacred throughout Egypt. It was especially so at Bubastis, where it was given a sacred burial. There several acres are honeycombed with pits for their receptacle. Sometimes cats were cremated at death, and at other times they were carried amid lamentations to the embalmer. to be prepared with oil and cedar and other aromatic substances, after which they were deposited in the sacred vaults. Thousands of bronze cats have been collected and sold to collectors and travelers.

Cat-headed deities were not uncommon in the Egyptian Pantheon. In the sacred "Book of the Dead" a cat-headed god armed with a sword stands at the twelfth gate of the field of Aaru in the dwelling of Osiris. Bast of Bubastis, sometimes called the Queen of the sky, or inscribed as the Lady of Life, was cat-headed. In the hand of the figure of this goddess was often borne the sistrum.

The sistrum was everywhere more especially used in the worship of Isis, the consort of Osiris, and with him and the child Horus constituting the most celebrated triad of deities in Egyptian history. Isis

was also sometimes figured as cat-headed, and was a moon goddess.

The learned Plutarch has written on the sistrum and its significance in his celebrated theosophical essay on Osiris and Isis. The sistrum was a type of creation. bolized generation and end, and these were brought about by the changes and motions of the elements. The shaking of the sistrum repulsed evil and restored natural processes. The Lunar sphere surrounded that part of the universe that was subject to birth and death. A cat with a human head was figured on the top of the arch of the sistrum with the head of Isis or other deity below. The cat signified the moon, and its human head, the intelligence and rationality of the changes connected with it. The cat was like the moon in its nocturnal habits and in its pied (tabby) color; the pupils of its eyes grew full and dilated at the full of the moon and became thin and dull during its wane. There was a likeness in its fecundity also, as the total productivity of the seven allotted litters in the cat's bearing period equalled in number the illuminations of the moon. ancient author concedes, however, that the last statement may be somewhat fabulous, yet we note in passing the survival of the mystic seven in tales of felis domestica. The childhood story of the wives with their sacks of cats and kits coming from St. Ives still lingers in the memory, and Lafcadio Hearne has recorded a tradition of St. Pierre that if you eat cat seven times or eat seven cats no witch, wizard or quimboiseur can ever do you harm, especially if you eat the cats on Christmas Eve. Leland tells a Tuscan story of undoing the spell a witch in the form of a black cat had wrought upon a child by means of an incantation and a Pandora box filled with ingredients innumerable, among which was a pinch of the hair of the cat and the seven of clubs and the seven of spades.

Isis was gifted in magic power which she had acquired guilefully from her father the sun-god. Thoth, who had the crescent of the moon in his crown and measured time, placed on the neck of the dead the papyrus stem amulet on which often figured a cat, which signified verdure and vigor and protected the members of the body. Thoth was skilled in magic and healing. In a magical formula preserved, belonging to a later period, the great name of Thoth appears as the name answering to the seven vowels, whom each god honors and each demon fears. By this formula any dream desired could be sent to any person, but it must be written on a tablet with a solution of myrrh and put in the mouth of a cat, one black all over which had been killed.

Honored in antiquity with a place in the most sacred associations, how came the position of the cat to be reversed in the history of human credulity? There is no mistake in the sincerity of the belief which prevailed for many centuries that the forefathers of our domestic pets were the arch enemies of mankind. Satan's wiles were accomplished through the instrumentality of cats and the black one was his especial affinity.

Malays guard against permitting a cat to come into the presence of a dead body lest brushing against it the evil spirit in the cat may enter into the corpse bringing it to an unnatural and troublesome life.

In an old Italian spell for bewitchment the skin of a black cat burned and powdered fine was mixed with pepper, pulverized horse-scrapings and earth over which a toad had passed, while the witch chanted:

"Poisoned earth and powder fine To the powdered cat I join, "Tis the worst, and yet the best For my vengeance—for the rest Catskin powdered; naught is worse; With the scraping of a horse, Pepper next to make it good, Earth well poisoned by a toad; "Tis a mixture which, when done, Will rack and ruin many a one, And they shall know no good or peace, Nor shall their sufferings ever cease, Until they humbly come to me And beg for mercy on their knees."

With the fall of the ancient gods the power of those who ministered with them only worked evil. Milton named Isis among the legions of Satan who,

"With monstrous shapes and sorceries abused

Fanatic Egypt and her priests to seek Their wandering gods disguised in brutish forms

Rather than human."

In the street and the home the jingling of the bells displaced the sistrum in frightening evil things away.

"In this corner of the cupboard,
I put this bell to drive afar
Pluto and his company,
That in this house they may not come,
Neither in form of dog or cat—
away."

May the bell ringing drive the wretches

"Do you mean to say," said Judge Powell in the trial of Jane Wenham, "that you find her guilty upon the indictment, for conversing with the devil in the shape of a black cat?" "We find her guilty of that," the foreman replied, and the poor creature was sentenced to death, but the craze had spent its force and the crime was pardoned.

Cats were connected with all the baleful influences of the moon. In Yucatan the descendants of the Mayas pinched their tails to drive away an eclipse. As emblems of the devil they were flung into the fires in Paris on St. John's night. The mystic seven returns again in the Hungary legend that every black cat turns into a witch at the age of seven. Grimm gives it as a common saying that a cat of twenty turns witch, and a witch of a hundred turns cat again.

The exit and entrance of a strange cat were ominous. Shylock speaks of some that go mad if they behold one. Tradition says the great Napoleon had a marked fear of them, and that Henry III. of France swooned at sight of one. Cat is used as a word of contempt in "The Tempest" and

"Midsummer Night's Dream," and the rabble are called cats in "Coriolasus." The thrice mewing of the brinded cat was the signal for the assembling of the weird women in Macbeth.

Multiples of three were used in winding up charms and so were valuable in formulas:

"Thrice to thine and thrice to mine, And thrice again, to make up nine."

The traditional nine lives were part of the accepted outfit of the cat's equipment for his supernatural associations. It is referred to in "Romeo and Juliet" and used by Shakespeare's contemporary Ben Jonson and other poets and dramatists of that period and subsequently.

As a Roman poet said, Diana, the moongoddess, turned into a cat, when, in the war of the Titans and the gods, the latter were put to flight, so it was said that old women turned into cats in Italy, Germany and Scotland. Four ministers attested the truth of the tale which Captain Burt brought from Scotland in 1730, that the leg of a cat cut off by a man it attacked turned into the leg of an old woman. The serpent woman Lilith who tempted Adam was pictured in the sixteenth century with the body of a cat.

The drawing of the blood of a witch, according to the lore of sorcery, restored her to her normal bodily form, and this is perhaps the key to the understanding of the widely prevailing belief in the efficacy of cat's blood in folk-medicine. Blood from a cat's tail cured erysipelas and epilepsy. If the cat was black, it cured shingles in Maine and ringworm in Cape Breton, Hair of the tail cured a stye if used on the first night of the new moon. The blood of a tortoise shell cat was a remedy for warts but only efficacious during the month of May. A belt made from the skin of a black cat dried in the autumn sun was worn around the waist for rheumatism by Negroes of Louisiana.

The drawn blood of the cat broke the spell of bewitchment that held the victims enthralled, but the moon's changes con-

trolled the months and it was only when her phases were favorable that magic was effective. On certain moon days Baby lonian kings refused medicine and Archbishop Theodore said bleeding was dangerous.

As old poets said the moon was "the governess of floods," "the watery star," "the ladye of moisture," and the "mother of all humors," the movements of her familiar face have been eagerly watched from time immemorial for omens of changes in the weather. If the cat scratched its ear it was a true sign of rain, and if it si with its back to the fire, as the North Carolina mountaineers said, a cold snap was inevitable. An old English poet wrote,

"True calendars as pusses eare Wash't o're to tell what change is neare."

Washing the cat, pouring water on it, or taking it into the river and splashing it around and letting it escape are some of the magical ceremonies for bringing showers. The cat should be black to simulate the black cloud that brings the rain.

In Australian myth the moon was a native cat that fled from a man jealous of it and has been wandering ever since. Freyja was a Norse moon goddess and had four names, each identified with one of the moon's monthly changes. She was famous in love affairs and fond of her cats, two of which drew her car. this she went to the funeral of Balder and rode to the battle fields of Odin, with whom she shared the slain. With the dead she is associated in the under world and even there her cats accompanied her and became the emblems of nighthags witches, and in the tales of witches' dances in the middle ages the musician sometimes used a cat's tail for a fife.

Freyja was a friend of woman and assisted in childbirth and marriage, though there are legends of trouble with her husband because of her excessive love of finery. A saying survives that a bride will have fine weather at her wedding if she feeds the cat well so as not to offend the goddess. Another says that a maiden who is fond of cats will have a sweet tempered husband. In some countries a cat has been a favorite bridal gift, bringing a happy wedded life. The sneezing of a cat was a lucky omen for a woman about to be married, but it brought bad luck for a bride to meet one on the way to the church.

FAMILY TREES.

It was a delicious Hibernicism of Oliver Wendell Holmes that "one should be careful in the selection of his ancestors;" this of Holmes is as sound in logic as the statement attributed to Paracelsus, that it was not the fault of David, it was not the fault of Bathsheba, but it was the fault of Solomon. Be these things as they may, to be well-born, or eugenized (if one may coin the word), is fortunate in a world so full of agencies inimical to existence; though the reverse kind of birth need by no means argue an untoward or hopeless future.

Consider first a family tree that must have enraptured Galton: Jonathan Edwards, the great divine and one time president of Princeton, was born in 1703. Of his descendants 1394 have been identified, not one of whom was ever convicted of crime, and most of whom have occupied positions of honor and trust: among these were 295 college graduates (college graduates, as every one knows, becoming saints by Commencement day), 12 college presidents, 65 college professors, 1 vice-president of the United States, 3 United States senators, 60 physicians, 100 clergymen, 75 army and navy officers, 60 prominent authors, 100 lawyers, 30 judges and 80 public office holders.

It would seem there are many families in which for several generations have been born great scientists, physicians, poets, beautiful and noble women, painters, musicians, clergymen, lawyers, philanthropists. Among fifty great poets, including Burns, Byron, Goethe, Heine, Schiller, Milton and Tennyson, more than a score had illustrious family connections. Among forty painters, including Michael Angelo, Correggio, Raphael and Van Dyke, more than twenty had great relatives. Among musicians Sebastian Bach's family, beginning with Weit Bach in 1550, continued through eight generations to produce musicians, 29 of whom attained real and solid eminence. And it would seem, indeed, that intellectual aptitudes and the persistence of noble ideas and of tender ideals, oftentimes becomes intensified in the fortunate posterity.

On the other hand, instances of abnormal heredity fill the treatises on psychiatry. One need but cite the following, also from *The Medical Review of Reviews*: Max Jukes, born in 1720, had 1,200 identified descend-

ants, of whom 130 were convicted of crime; and this family are considered first and last to have cost the communities in which they elected to live considerably over a million dollars. The tally follows: 300 in the poor house, 300 died in childhood, 440 syphilitic or otherwise viciously diseased; 400 physical wrecks; 50 notorious prostitutes, 7 murderers; 60 habital thieves who averaged 12 years in jail.

So oftentimes a mental aberration or disease in the parent may be perverted into a immorality or even a criminality in the untortunate child; moreover what may begin as merely a bad habit will, in the course of several generations intensify itself, like the crescendo in music, until a monstrously wicked strain is manifest.

We are here reminded of Hawthorne in one of his sombre moments, in *The House of the Seven Gables*. The past lies upon the present like a dead giant's body, so that it is as if a young giant had to waste all his strength in carrying about the corpse of an old, anatomistic giant. We sleep in dead men's houses; we are sick of dead men's diseases; we live in dead men's lives, etc.

Yet much of what is termed bad heredity is surely a sort of fatalism apart from any working of hereditary law—a fatalism developed after birth, when the child realizes the unhappy nature of its parentage. Indeed, Mr. Wm. A. Pinkerton, the famous detective, recently declared, "There is no criminal class. I mean hereditary criminals. My contention has always been that poverty and environment were the chief causes of making criminals." And in his experience it by no means always follows that the children of vicious parents become vicious.

Moreover, heredity is but one of the influences which go to shape individual destiny. Other influences at least as powerful are post-natal environment and the human will. Surround from his birth an infant born of diseased, or starved or alcoholic or depraved parents, with salubrious factors; assure a normal functioning of his body; bring him when old enough under the benignant influence of religion, and especially of prayer, with an ignorance, if possible, of the nature of his family past—and an impressively "degenerate" family tree may end with his birth. Especially if the will, the mightiest force in all the cosmos, can be trained to bear upon the situation.

Elizabeth A. Irwin, field worker of the committee on hygiene of school children of the Public Education Association, put the question to the children in the course of an inquiry into feeble-mindedness in pupils. But these particular answers came from children who are not feeble-minded, and Miss Irwin thinks that they give a better picture of the home life of the different children than a bookful of description. Here are the answers, also from normal children, to the question, "What is a horse?":

He's what drags your father's wagon.

He's what earns a living for you. He wears his own kind of clothes. and leaves his master beat him.

My sister says a horse is a camel; but I don't know yet.

Around our block they say it's a cow; but I don't think so.

He's all skin and bones, and eyes and things.

A horse is meat.

The next question put to the children was, "What is the difference between paper and cloth?" If you don't believe that the children really gave the following answers, ask Miss Irwin:

Clothes you wash for a living, and paper you wrap 'em up in when you take 'em home.

With cloth you wash the window,

and paper you stick in when the window's broke.

On paper flies stick; on cloth they don't.

Could a page of word painting give a better picture of life in a block in the slums of the upper West Side than those definitions, or than the following answers to the question, "What is the difference between a butterfly and a fly?":

A butterfly sits on flowers, and a fly sits on your bread.

A butterfly has nice ways, but a fly, now, is a bad thing.

A butterfly you leave fly, but a fly you swat.

A fly buzzes when it flies, but a butterfly just flies.

A butterfly flies in the sun, but a fly stays in the house to fly.

A butterfly has wings all white with flour, but a fly has wings like rubber or celluloid.

Flies I seen, yes; but we don't have no butterflies around our block.

Here are some more of the questions and answers, taken at random:

"What is a spoon?"

"It is a vehicle that you eat things on."

"What would you do if you were going to take part in an important affair?"

"I'd hire a coach first."

"Why do you think it is better to judge a person by his actions than by his words?" "Cause. S'pose he lied."

"Honor the physician with the honor due him; for the uses which you may have of him; for the Lord hath created him. The skill of the physician shall lift up his head, and in the sight of man he shall be in great admiration. The Lord hath created medicines out of the earth. and he that is wise will not abhor them. Was not water made sweet with wood that the virtues thereof might be made And He hath given men skill, known? that He might be honored in His marvelous works. With such doth He heal man, and taketh away their pains. Of such doth the apothecary make a confection; and in His works there is no end; and from Him is a sweet odor diffused around. My Son, in thy sickness be not negligent to pray unto the Lord, and He shall make thee whole. Give a sweet savour, and a memorial of fine flour, and make a fat offering; then give place to the physician, and he shall make thee whole; for the Lord hath created him. Let him not go from thee, for thou hast need of him. There is a time when in his hands there is great success; for they shall also pray unto the Lord, that he would prosper that which they give for ease and remedy; to prolong life. He that sinneth before his Maker, let him fall into the hands of the physician."—Ecclesiasticus.

BOOKS.

We neglected to state in our Book Reviews of July last that Professor Vorwoon's fine book on Irritability is published by The Yale University Press, New Haven, Conn.

ALCOHOL AND HUMAN EFFICIENCY.

THE human organism is the superbest and the most serviceable machine ever contrived on this planet; and many among us are still sufficiently anthropocentric in our notions to consider it the supremest cosmic product. It is, therefore, nothing short of tragic how frequently, by means of alcohol, the manmachine deteriorates, gets creaky and uncertain in its mechanism, breaks down, and goes to the scrap heap long before the term of its normal usefulness.

"Intemperate youth hands over a worn out body to old age:" worse yet, a body thus worn out seldom gets beyond maturity, seldom, indeed, gets much into middle life.

Those who are charged with the conduct of great commercial and industrial enterprises must ever seriously consider this degenerating agency. For example, managers of railways are bound to require either very moderate use of alcohol among their employees; or to insist upon total abstinence. Intemperate railway employees have been found unable to recognize green and red, the two colors most exclusively used in operating trains. So unsuspected might this abnormality in vision be that only an accident, with loss of human life, might reveal the engineer's inability to recognize the sig-"toxic amblyopia"—which Such comes also from the inordinate use of tobacco— varies in degree from slight dimness of vision, through the inability to recognize colors, to seeing everything grey, and thence to total blindness. Those who are every day responsible for the lives of thousands of passengers would themselves be criminal were they to take the risk of engaging such men.

Dr. G. B. Cutten, in his excellent book, The Psychology of Alcoholism, finds that among 138 "visual defects" 64 were hard drinkers, 45 used both alcohol and tobacco to excess, and 23 were inveterate smokers; this leaves but six cases due to diabetes and other causes.

The neuron (the nerve cell and its fibres) is the basis of all psychism, from rudimentary protoplasmic life, up through sensation, motor activity and correlation, to speech, memory, ideation, will, judgment and divine reason—it is this neuron which is of all tissues in the body the most affected by inordinate alcoholism, and especially by the drinking of fusel oil or wood alcohol whiskey, about the only kind which many poor men get. The neuron, progressively shrinking, becomes in time a mere shell with disintegrated debris, in the place of a once former virile entity, of a once epitomized mind

Cutten holds—and many eminent psychiatrists agree with him—that the surest cure of the drink habit is offered by religion. In three-fourths of the cases thus treated there is never a desire for a return to alcoholism, nor indeed for another drink; and the man seems really reborn and made whole again.

NUGGETS.

(From Strictly Business, by O. Henry.)

On the surface I have traveled many times around the world in a golden airship wafted on two wings—print and dreams. I have seen (on one of my imaginary tours) the Sultan of Turkey bowstring with his own hands one of his wives who had uncovered her face in public. I have seen a man in Nashville tear up his theatre tickets because his wife was going out with her face covered—with rice powder. In San Francisco's Chinatown I saw the slave girl

Sing Yee dipped slowly, inch by inch, in boiling almond oil to make her swear she would never see her American lover again. She gave in when the boiling oil had reached three inches above her face. At a euchre party in East Nashville the other night, I saw Kitty Morgan cut dead by seven of her schoolmates and lifelong friends because she had married a house painter. The boiling oil was sizzling as high as her heart; but I wish you could have seen the fine

little smile that she carried from table to table.

If you are a philosopher you can do this thing: you can go to the top of a high building, look down upon your fellow-men 300 feet below, and despise them as insects. Like the irresponsible black waterbugs on summer ponds, they crawl and circle and hustle about idiotically without aim or purpose. They do not even move with the admirable intelligence of ants, for ants always know when they are going home. The ant is of a lowly station, but he will often reach home and get his slippers on while you are left at your elevated station.

Man, then, to the housetopped philosopher, appears to be but a creeping, contemptible beetle. Brokers, poets, millionaires, bootblacks, beauties, hod-carriers and politicians become little black specks dodging bigger black specks in streets no wider than your thumb. From this high view the city itself becomes degraded to an unintelligible mass of distorted buildings and impossible perspectives; the revered ocean is a duck pond; the earth itself is a lost golf All the minutiae of life are gone. The philosopher gazes into the infinite heavens above him, and allows his soul to expand to the influence of his new view. He feels that he is the heir to Eternity and the child of Time. Space, too, should be his by right of his immortal heritage; and he thrills at the thought that some day his kind shall traverse those mysterious aerial roads between planet and planet. The tiny world beneath his feet upon which this towering structure of steel rests as a speck of dust upon a Himalayan mountain—it is but one of a countless number of such whirling atoms. What are the ambitions, the achievements, the paltry conquests and loves of those restless black insects below compared with the serene and awful immensity of the universe that lies above and around this insignificant city?

It is guaranteed that the philosopher will have these thoughts. They have been expressly compiled from the philosophies of the world and set down with the proper interrogation point at the end of them to represent the invariable musings of deep thinkers on high places. And when the philosopher takes theelevator down his mind is broader, his heart is at peace and his conception of the cosmogony of creation is as wide as the buckle of Orion's summer belt.

Knowledge he had kidnapped from cyclopedias and handbooks of useful information; but as for wisdom, when she passed he was left sniffling in the road without so much as the number of her motor car. He could and would tell you the proportion of water and muscle-bearing properties of peas and veal, the shortest verse in the Bible, the number of pounds of shingle nails required to fasten 256 shingles laid four inches to the weather, the population of Kankakee, Ill., the theories of Spinoza, the name of Mr. H. McKay Twombley's second hall footman, the length of the Hoosac Tunnel, the best time to set a hen, the salary of the railway post-office messenger between Driftwood and Red Bank Furnace, Pa., and the number of bones in the foreleg of a cat.

The sun has risen on the Arabian nights. There are no more caliphs. The fisherman's vase is turned to a vacuum bottle, warranted to keep any genie boiling or frozen for forty-eight hours. Life moves by rote. Science has killed adventure. There are no more opportunities such as Columbus and the man who ate the first oyster had. The only certain thing is that there is nothing uncertain.

This open letter "To John," in the "personal" column of a weekly paper: "To John—If you'll come back home, John, I promise not to run for office—if I git a chanst—and not to search your pockets when you come home, as usual, in your cups; neither to find fault with you more'n what's necessary for your own good, and

not to throw up to you any more 'bout me havin' to pay for the marriage license; and not to tell you my family is better'n your'n—though Lord knows it IS. So I close, hoping these few lines will find you on your way home, where any man with a grain o' common sense orter be."—Atlanta Constitution.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M.D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

RAISE THE INFANT FROM DESTRUCTION'S WAVE.

A SUBSCRIBER has resurrected a quaint bit of poetry "from an old school reader—probably over fifty years old or more." She finds it so completely opposed to our present day teaching that she sends it as a curiosity of literature, which indeed it is!

THE DROWNING FLY.

1. In yonder glass behold a drowning fly;
Its little feet how vainly does it ply!
Its cries we hear not, yet it loudly cries,
And gentle hearts can feel its agonies!
Poor helpless victim—and will no one save?
Will no one snatch thee from the threat'ning

Is there no friendly hand—no helper nigh, And must thou, little struggler—must thou die?

- Thou shalt not, whilst this hand can set thee free;
 - Thou shalt not die, this hand shall rescue thee! My finger's tip shall prove a friendly shore; There, trembler, all thy dangers now are o'er; Wipe thy wet wings and banish all thy fear: Go, join thy num'rous kindred in the air; Away it flies, resumes its harmless play, And lightly gambols in the golden ray.
- 3. Smile not, spectators, at this humble deed;
 For you, perhaps, a nobler task's decreed:
 A young and sinking family to save;
 To raise the infant from destruction's wave!
 To you, for help, the victims lift their eyes:
 Oh! hear, for pity's sake their plaintive cries;
 Ere long, unless some guardian interpose,
 O'er their devoted heads the flood may close!

In these fly-swatting days such sentiment as the above falls upon the ears of a heartless generation—so far as the fly is concerned. The trouble with the fly is that we have a lot of new evidence since the anonymous poet wrote these tender verses, and every line of evidence makes it worse and worse for the fly. And so we are

crusading against the fly, young and old, all of us—that is to say, nearly all of us, and would it were quite all! We think it is but right to teach even the children eternal enmity to the fly and other vermin, because these pests make this world unsafe for beings of infinite worth and usefulness compared with the best insect that ever lived. We are wiser than the knowing ones of fifty years ago, and if we throttle some of the sentimentality that made such a fine appearance then it is only that we may cultivate in its place a wholesome fear of dirt and pestilence and a determination to make this world a safer place for men and women and useful creatures to live in. We are very willing to "disturb the balance of Nature" if such disturbance must be, in order to accomplish our benevolent purpose.

The poet has charged his last stanza with a saving sentiment. We will all endorse it. It is indeed for us to save "a young and sinking family," "to raise the infant." "The victims lift their eyes" literally to us. We are working at "a nobler task" than that which the poet enacts in his story, and we find that in order to perform our "nobler task" with credit we must sentence to death every fly that can be reached by the long arm of civilization. We will take up the task the poet suggests—and swat the fly.

Now we hear some gentle reader murmur,—"Ah, but have we not parted with something sweet in our lives when we put aside the generous motive of these old verses, and replace it with heartless warfare against the helpless insects who surely do not wish to harm us?"

Piffle!

THE COSTLINESS OF RATS AND OTHER VERMIN.

A Brief review of this question in the Journal of the American Medical Association tells us that rats are an exceedingly expensive luxury. It adds:

A recent article in the Farm and Fireside discusses the amount of damage done in this country by rats, and estimates that there are in the United States at least 300,000,000 of these animals, alike destructive to property and dangerous to health. Rats are said to destroy a hundred million dollars' worth of grain every year in this country, or enough to feed one hen for every man, woman and child in the nation. The annual cost of rats to the nation is estimated at \$360,000,000. In addition, the rat population of the country forms a fertile field for the dissemination of bubonic plague, which only needs a starting-point in any of our seaports to spread throughout the country and cause the loss of thousands of lives. In the same issue of the Farm and Fireside, but in a different department, appears an article on the cattle-tick, in which it is estimated that the difference between the market value of an animal free from this parasite and one infected with it is about \$8 per cow, and that the cattle-cick is to-day costing the stockmen of the country a billion dollars each decade, or a hundred million dollars each year. The discovery and development of bacteriology showed that man had been carrying on for centuries an un-conscious struggle with the lower forms of vegetable life. Recent additions to our knowledge of the habits and characteristics of vermin show that an equally relentless struggle has been going on between man and the lower forms of animal life.

What are we doing about it? What are we going to do? It would seem wise while we are increasing our armament against our imaginary human foes to put in a modest appropriation every year for warfare on these ubiquitous enemies to our health and our national wealth. Some one suggests that the ancient and honorable profession of rat-catcher still exists, chiefly in the underworld of our great cities, a semi-respectable and marvelously skilled occupation. Why not revive this profession and restore it to the dignity that it enjoyed centuries ago? "So long as such an anachron-

ism as the rat exists, there is no inconsistency in fighting it with a medieval institution like the rat-catcher."

This is very logical reasoning but it may not be the best business management. We live in an age of prevention, so called. That is to say, we like to talk about preventing a whole lot of things that we have found to be almost unbearable. Sometime some of this talk is going to eventuate into acts. Indeed, even the most pessimistic critic must admit that preventive measures are well under way in some lines of sanitation. But the rat doesn't feel the pressure yet, except in a very few quarters. Why not swat the rat?

Dr. R. H. Creel, of the United States public health service, says that "Of all the parasites that have their being in and around the habitation of man, the rat has less to justify its existence than any other. As devoid of any redeeming traits as the fly, that has been the subject of a nation-wide sanitary crusade, the rat is a greater pest because of its depredations and its possibilities for harm in the transmission and perpetuation of bubonic plague in a community. The latter consideration is of more serious import in seaport towns, wherever they may be, and in those localities where plague has once appeared, but with the world-wide march of bubonic plague in no city should its advent be regarded as improbable. Merely to keep premises clean and free of rubbish will be of but little benefit, as rodents generally, even when abundant rubbish is available, prefer more secure cover, as that beneath floors and withother measures for the destruction of rats all buildings, chicken yards, garbage receptacles, sidewalks and planked areas must be built or repaired to prevent rat harborage. Garbage cans should be made of metal with proper fitting tops."

Let us apply the little knowledge that we now have in carrying on the campaign wherever we happen to be; and let us agitate, agitate, agitate,—until every community will consider the harboring and feeding of these expensive and dirty thieves as beneath its dignity and beyond its means.

IS BATHING A BAD HABIT?

LISTEN to the oracular utterances of *Doctor*!! Elmer Lee, with which he gives the British public a hard jolt, in the magazine called "Health Culture."

Bathing is an acquired habit, unnecessary and even harmful. Cold or hot water show-

ers or sprays, and any form of immersion. will be injurious in the end. Man is an air animal, not a water-beast. An aged woman asked me if it was good practice to chill the human skin with cold water to warm it? Cold bathing is recommended as a body warmer, so is a hot toddy of whisky, also a



cold cocktail of whisky. Man has acquired many conceits. A bath-tub is an enemy in the house. It is expensive and adds to the toil of women. Bathing begets false security against disease, weakens and injures the skin, extracts bodily energy and magnetism, and entails on society a needless habit.—Dr. Elmer Lee, in "Health Culture."

We thought this would be good reading for August. We might just laugh at it and let it pass, for it is plain that the doctor is too much under the spell of the old woman whom he quotes as a backer for his "air animal" theory. But we are not going to let it pass until we have paid our respects to the mossback who passes off such lame logic under the name of "health culture." The fool is known by his folly. He needs no other label. And the worthy Dr. Lee is no exception to the rule, for with his demonstration of what he knows about cleanliness he has given himself away cleaner than a whistle! He says too much.

He says that bathing "extracts bodily energy and magnetism." We congratulate the

Doctor if he knows what he is talking about; we don't. Every pseudo-scientist who is short on science and long on lingo likes to yap about magnetism. We will bet dollars to doughnuts that this authority doesn't know what magnetism means. If he will kindly show us—as we are from Missouri—any "magnetism" that he may have carefully concealed in his person, and also show us how said "magnetism" can be "extracted" by soaking in water, we will give up bathing for the rest of our lives and, moreover, we will see that he is elected president of the British Medical Association—if we have to walk to England and do it ourselves.

Be not deceived, gentle reader; some of the most arrant nonsense that gets into print nowadays is in the pages of so-called "health" journals and "culture" boomers of which the above is a sample. Dr. Elmer Lee is an "air animal" all right, just as he claims to be,—of the kind that we call in this country, "hot air."

ORTHODOX AND HETERODOX.

Sounds very serious in hot weather, doesn't it? Well, let us consider a dreadful thing that has just happened in a Pennsylvania hospital.

It was decreed that in this hospital "there must be no card playing."

It is reported that during a recent tour of inspection of the hospital, "a member of the board of managers, and one of the mainstays of the institution," was startled on seeing a nurse indulging in a game of solitaire. Later on during the tour of inspection she entered the room of a friend—a private patient—and here, too, she found the nurse playing solitaire. The patient, who is a prominent society leader, remonstrated, inasmuch as she had employed the nurse, and told her to secure another deck of cards and she would teach her to play "bridge." The board member objected, but it is stated that the patient and her nurse continued to play cards each day during the remainder of their stay in the hospital. It is undoubtedly true that the board member made her objection as a matter of personal belief and principle, but in doing this she seems to have overlooked two things: First, the rights of the patient and her private nurse; second, the fact that no one member of a hospital board has the authority to individually give such an order. It looks like a case of overestimating one's importance and authority.

So says the International Hospital Record. As we ourselves have never indulged in the pastimes mentioned, we may be permitted to remark that it looks to us like a case of Phariseeism, and we have yet to see a successful hospital—or church—under the domination of Pharisees. The report fails to tell us what camel the lady manager was swallowing, the while she was straining at the solitaire gnat.

The distress of this hospital is a nice little sermon to us on the unwisdom of requiring other people to "be good" in our own particular way. Sick and convalescent folk are peculiarly sensitive about any interference with their rights to hold their own opinions and practise their own beliefs; life in the hospital subjects them to so many inevitable hardships and privations that they naturally resent all undue restrictions of their personal liberty. And why not? If the hospital accepts "a prominent society leader" as a patient and takes her perfectly good money, let it allow her as many of her own home comforts as are not inconsistent with her recovery. What is the hospital for?

THE NURSE ANESTHETIST AND THE LAW.

We have presented this subject many times from the viewpoint of the physician and the lawyer. Nurses have little to say in this controversy, and it is very much to their credit that they have avoided the discussion of their own rights, leaving it mostly to others to speak for or against them. We find, however, in the *Trained Nurse* for July a very sensible and temperate presentation of the matter, a part of which we are glad to quote with our hearty approval:

Undoubtedly, some nurses, through long experience, may be able to administer an anesthetic skilfully, much more skilfully, in fact, than some young doctor with less experience, but that fact does not make it according to law in any State. The giving of anesthetics is unquestionably the practice of medicine. It has been urged that nurses administer other drugs, as ordered by physicians, then why not anesthetics? With most other drugs it is possible for a physician to prescribe an exact dosage, and the amount to be given is practically never left to the judgment of

the nurse, as is the case when an anesthetic is given. It is also true that in many cases in which the person to be anesthetized is a bad surgical risk, the administration of the anesthetic requires as much skill as does the operation.

The fact that prominent surgeons started the practice of having nurses give anesthetics has helped to popularize the practice, but it

does not make it legal.

The practice of giving anesthetics has been heralded as another great opportunity for nurses to specialize in, in the practice of their profession. Perhaps we ought to join in the popular acclaim, but somehow we cannot help urging nurses to be cautious about undertaking this responsibility, which is clearly undertaking the practice of medicine. The time may come when the giving of anesthetics will be legally placed in the hands of nurses, but it has not come yet, and we cannot help a lurking feeling that it ought to remain in the province of practice of medicine, rather than of nursing. All nurses should be taught sufficiently in regard to anesthesia, so that they can assist in time of emergency, but emergencies and regular routine are two different things.

MUSICAL MUTILATION.

That is the next thing in order. The problem of making the operating room attractive to the patient is approaching a happy solution. Hereafter when the nervous patient is preparing to go to the hospital, instead of spending her time in giving away her trinkets and dictating the directions for her funeral, she will peruse the hospital list of "records" and select the tunes which she wishes to "accompany" her operation. It is a jolly good idea! With thanks to the Journal of the American Medical Association, we are able to give the details in the original:

To the Editor:—For some time I have been employing a phonograph in my operating-room as a means of calming and distracting my patients from the horror of the situation when going under the anesthetic and during operations performed partially or entirely with local anesthesia. The phonograph talks, sings or plays on, no matter how anxious, busy or abstracted the surgeon, anesthetist and assistants may be, and fills the ears of the perturbed patient with agreeable sounds and his mind with other thoughts than that of his present danger. Too often when told to keep up an agreeable conversation with our patients operated on under "local," the assistants merely ask again and again if the sufferer is being hurt or if he feels any pain, thus only adding to the self-consciousness of the pa-

tient, and, after weather commonplaces are exhausted, it seems impossible to find a topic for conversation of any sort, and dead silence ensues. It is not uncommon for nervous patients to beg to have the phonograph continue, should it run down, and many of them converse animatedly with the anesthetist on the subject of the pieces being played throughout the entire operation.

I owe to Dr. Burdick, our anesthetist, thanks for his selection of records admirably adapted to the tastes and temperaments of the subjects.

EVAN O'NEILL KANE, M.D., Kane, Pa. Surgeon, Kane Summit Hospital.

The doctor's proposition draws the following cheerful comments, which develop the idea along logical lines.

OPERATING-ROOM SLUMBER SONGS. To the Editor:—In your issue of June 6, I read with interest Dr. Kane's account of his musical operating-room. No doubt it is an admirable way of assisting the anesthetist, although I can imagine some of the disadvantages. For example, a patient given to dancing might become uncontrollable on hearing the "Argentine Tango," and then, again, the surgical nurse might be the cause of complications were one to play the "Matrimonial Glide." But outside of these unforeseen accidents good results could no doubt be obtained.

As a historical note I would add that Dr. Kane

As a historical note I would add that Dr. Kane is not a pioneer in this respect. Henri de Mondeville (1260-1320), a shining light in his time and possessed of a most delightful line of sarcasm, ad-

vocated the following:



"Keep up your patient's spirits by music of viols and ten-stringed psaltry, or by telling him that he has been elected to a bishopric if a church man, or by forged letters telling him of the death of his enemies." R. W. Mendelson, M.D.,

Des Moines, Iowa. Answer.—Apropos of this we quote the following suggestions from B. L. T.'s Line-O'-Type Department of the Chicago *Tribune*.

SELECT YOUR RECORD (June 8).

"I owe to Dr. Burdick, our anesthetist, thanks for his selection of records admirably adapted to the tastes and temperaments of the subjects."-EVAN O'NEIL KANE, M.D., Kane, Pa.

This opens up a new avenue of fancy. When

you are laid on the table and the saw is called for, what would be your choice of phonograph records? M. F. votes for "This is the Life."

THE ANESTHESIEST WAY (June 10).

Select you phonograph record before you go

"under the knife."

Chick: "You can put me down for 'Good-Bye,
Everybody."

L. C. W.: "'If You Talk in Your Sleep, Don't
Mention My Name.'"

THE ANESTHESIEST WAY (June 12).

When I am on the table And the surgeon's saw I see, Let the interne start the record, "What Will the Harvest Be?" -MARTHA.

Dandy: "Just Tell Them That You Saw Me." F. R.: "Please Go 'Way and Let Me Sleep." W. M. B.: "Any hymn found in the appendix to be followed by a collection."

THE ANESTHESIEST WAY (June 15).

C. E. B.: Turn on the record, "How happy could I be with Ether were t'other dear charmer away."

P. B. D.: "I Don't Know Where I'm Going,

But I'm on My Way."
F. G. F.: "Good Night, Nurse." M. L. P.: "She Sleeps in the Deep."

THE ANESTHESIEST WAY (June 20).

Prize record, besought by H. M.: "Let a little sunshine in."

We have only this to say,—that if the therapeutic phonograph is no better than the one that is now playing in the next flat while the editor tries hard to think, then death on the operating table would be a sweet relief. But why should we worry? Since the new idea is taking so well in Chicago we presume it will not be long before some of the big hospitals will have a full orchestra to accompany every act in the operating theater program.

NURSES AS CLIMBERS.

WE are not referring now to "social climbers," although some nurses have shown ability on the social ladder. We are calling attention to the climbing necessary in order to get around to the beds of patients in some of the state hospitals of the Empire State. In the News published by the Charities Aid Association we find this

The rigid economy necessarily practiced in the state hospitals last year because of inadequate appropriations, was sufficient to jeopardize the welfare of the patients. When a ward is so crowded with beds that the patients can not get into them except over the foot, the attendants can hardly be expected to maintain order at all times. The patients frequently protest against such conditions and discipline is exceedingly difficult to maintain.

This overcrowding is especially serious in the wards where the "disturbed" patients are cared for. In some of these the nurses are unable to reach the bed of the disorderly or abusive patients except by climbing over the beds of other patients.

The same kind of "economy" is debarring thousands of feeble-minded people from the institutions that ought to care for them. False economy often springs from ignorance of the real conditions under which funds are "saved."

The State is providing for 33,000 insane persons in public institutions, but is only providing for 9,400 feeble-minded. More than half of these are in institutions not designed for their care. Most people consider the insane dangerous, while they think the feebleminded harmless.

The State is beginning to understand, however, that the feeble-minded boy and girl are many, many times more of a menace to the community than many of the insane now in our State hospitals.

Here is a concrete example of what a "harmless" feeble-minded person may add to the cares of the taxpayer and the philanthropist:

Mrs. Johnson, of Montgomery County, is a feeble-minded woman, married, and has four young children. She is wholly incapable of providing proper surroundings for her family, so whatever defects the children have by heredity, their environment emphasizes and increases.

When the last baby came, only a few months ago, the father had been away drunk for several days. Not the slightest preparation had been made for the confinement and there was practically no food in the house.

This woman should be in an institution, before she can bear more children to add to the burden of the public, but there is no room in any institution for her.

The menace of the feeble-minded is becoming more serious as our people awake to the burden that they are adding daily to every community. It is not only expedient but highly essential that we should recognize feeble-mindedness wherever it exists and make ample preparations for taking every grown up case into custody, in some way or other, and thus preventing their increase. As for the children, our state institutions are demonstrating how they can be made happy and useful, while they are guarded from harm and temptation to go astray. What we need to-day is more room in these institutions.

Those who know little or nothing about the feeble-minded are apt to treat the matter flippantly, or to adopt the highly optimistic delusion that there are no such people where they live. They remind us of the ostrich.

Every nurse is likely to be consulted sometime as to whether some "queer" child is "all right" or not. Let your answer be very guarded; do not pretend to knowledge that you do not possess. Even the doctors make ridiculous blunders in such cases, and you will do the same if you are over confident or anxious to give a comforting answer to a worried parent. As with physical disease so with mental defect,—the future welfare of the child often hinges on a correct diagnosis of his trouble.

CAMP HYGIENE.

By Mary H. Tufts, Trained Nurse, Farmington, Maine.

EACH year marks a greater enthusiasm for the pleasures of a vacation spent "in the woods," so to speak; or at inland camps and cottages. And justly so; for a properly-planned vacation of this kind affords a great variety of pleasures, added health, and may be had at a reasonable expense.

But like other pastimes, a camping vacation may be either "overdone or underdone"; and is healthful only in proportion as one exercises common sense and personal

Certain hygienic precautions should be observed in camp life; whether one occupies their own camp or cottage, or a hired one, and whether the cottage be located at the shore or inland.

The matter of pure drinking water is very important. If possible, the supply should be obtained from a spring. ever the source, the water-supply should be located at least five or six rods from the camp or cottage, and on the "up" side from any source of sewage, as sink-drain or

If the supply is from a well, it should be kept cleaned out, and covered with a ventilated cover. If there is a possible doubt of the purity of the water, it should

be boiled.

Many filters cannot be depended upon to remove disease-germs, though they remove certain organic matter.

It is more healthful to have the camp or

cottage upon a somewhat elevated spot, to facilitate drainage; for dampness is the cause of many unhealthy conditions. sects and mosquitoes also breed in damp places and stagnant water.

The camp-building should be twenty or thirty feet from any body of water; otherwise the fogs which arise at night cause unpleasant and unhealthful dampness in the

Many of the small inland camps and cottages have no water-system or bath-room fixtures. Earth-closets or vaults are com-These should be kept free from objectionable odors by frequent cleaning out; and by daily use of dry loam or clay, and chloride of lime. Such a vault should be detached from the main camp-building; or, at least, should be separated from it by a corridor, having tightly closed doors at each end. It sohuld be ventilated by a window, and a ventilating-pipe passed through the roof.

The sink drainage should receive careful investigation by all who contemplate hiring a camp, or who are building their

Sink-sewage should not empty into small fresh-water streams; nor should the sinkslops be carried through a short pipe, into the ground, or into any receptacle near the underpinning of the camp; where it invariably seeps back toward the building, and decomposes in the soil there.



A deep earth pit may be dug, thirty or forty feet from camp; and the sink-slops conducted to it through tile pipe, having cemented joints. The pit should have either a stout woven-wire covering, or a metal or wooden cover, with a trap through which fresh earth or disinfectants may be introduced. Each day, fresh earth, and dry chloride of lime should be thrown into this pit; or milk of lime may be used; but for campers, chloride of lime is an inexpensive and convenient agent.

Chloride of lime solution, or 6 ounces of 40% formaldehyde solution to 1 gallon of water, should be used liberally, down the sink-pipe each day.

A few good shade-trees about the camp are desirable; but dense shade is not healthful, and favors the breeding of mosquitoes and black flies.

Rain water should not be stored out of doors in open barrels; for insects will lay their eggs in the water. For the same reason, avoid a camping-site near any stagnant body of water.

Rubbish and garbage should be carefully disposed of, so as not to attract flies, or afford a breeding-place for insects. Considerable garbage may be incinerated in the kitchen stove; and the rest should be buried. A pit may be dug at a considerable distance from the camp. It should be three or four feet deep; and each time garbage is deposited there, fresh earth, and a liberal sprinkling of chloride of lime, or milk of lime should be used. When this pit is filled, another can be dug. It is important to cover each deposit of garbage thoroughly. If the earth-closet at camp is not easily kept free from odors, it will be wise to empty all liquid slops in the garbage-pit.

All windows and doors should be well screened; otherwise one's life will be rendered a burden by black flies, mosquitoes, and the ever-present house-flies. Mosquito-candles burned in the sleeping rooms for a short time each night, will usually dispel insects.

The camp should be kept well aired by open windows; the bedding should be aired as often as every other day in the open air and sunshine. Pine or spruce boughs hung up on the walls, give a pleasant and healthful odor. If any rooms seem damp, remedy it by unslaked lime in plates about the room; renewing the lime when it begins to crumble.

A cellar under the camp, if near a body of water, is very damp. It is always best to have it well drained and cemented; and it is absolutely necessary to have any cellar windows fitted with stout frames, covered first with fine wire mosquito-netting, then with an iron lattice or strong woven wire. Otherwise, the predatory animals such as weasels, coons, skunks, mink, etc., will usually prove an almost constant nuisance; gaining entrance to the cellar and preying on food, especially meat or fish which may be stored there.

As a rule, all food stored in a cellar should be kept in covered receptacles; as a damp or uncemented cellar is always full of the spores of moulds and fungi, and other bacteria which contaminate food in open vessels.

Cellar walls and shelves should be whitewashed each year; and if the bottom is uncemented, should be sprinkled with milk of lime or formaldehyde solution, as described elsewhere in this paper.

Powdered charcoal is a valuable agent in preserving meat and fish, and in keeping the ice-box sweet. Dishes of charcoal should be kept, and frequently renewed, in ice-box, cellar, and in food-closets and jars. It may be sprinkled directly onto meat or fish, but being rather hard to remove by washing, is better enclosed in muslin.

Tinned foods should be at once removed from the can as soon as opened; and stored in glass, agateware, or crockery, but never in tin.

If ice is not available, all fresh milk should be scalded, put into a covered, sterile glass jar, and stored in the coolest available spot.

Meat, fish, and in fact any food which has become ever so slightly tainted, should be discarded. It should be remembered, that fresh fish decompose rapidly; and fish which has been exposed to the sun for any length of time, is likely to have developed a violent poison.

It will be found a great convenience to have the cellar shelves enclosed by cheese-cloth or mosquito netting, to keep flies away from meat and fish.

Much of the ice harvested from shallow inland ponds is unfit to use by putting directly into beverages. Ice-boxes should be kept very clean by a thorough scrubbing three or four times a week, with hot water and carbonate of soda or sal soda, and by scalding with boiling water, followed by airing out for an hour or more.

Out of door life provides the means to good health, or improved health to those who use these gifts with common sense.

But many people whose usual occupations are of a sedentary nature, make the mistake of greatly over-taxing themselves when on vacation in the country, by at once entering into the most strenuous and excessive muscular exertion, instead of working up to such recreations gradually.

The man or woman who for instance, does office-work, and then as soon as the vacation begins, launches out on long walks, strenuous hill-climbing, or hard rowing or swimming contests in hot weather, may confidently expect unhappy results to follow. If not, it is because kind Providence spares the unwise. Swimming when overheated, and rowing after a full meal are particularly hurtful.

One should not exercise to the point of exhaustion, especially in the hot sun; not go in swimming when over-heated, nor for an hour or more after a hearty meal.

A hurried or very hearty meal, taken when one is exhausted by strenuous muscular exercise, is likely to result in a more or less serious indigestion, especially in one having weak digestive powers.

The vacationist should remember that there is a "happy medium" between a silly introspection and an utter disregard of health and comfort.

Of late it has been noticed that persons who have practised swimming much, in fresh-water ponds, especially when the water was low, have contracted symptoms akin to articular rheumatism. This joint-irritation was thought by some physicians to have been due to an infection by certain bacteria and decomposing vegetable and organic matter in the water. With this possible effect in view, one should avoid bathing in brackish or stagnant pond water.

Garbage and waste should never be deposited in the water of any pond or stream. So-called "sun headaches," should be avoided by use of colored glasses.

Bites of insects are a part of camp life; but not necessarily a constant accompaniment. The bites of black flies may be very painful or oven suppurate. One should go to camp provided with plenty of good "flydope" and "mosquito candles"; also with some sothing lotion for sunburn, and other reliable emergency remedies.

At one time, sunburn to the extent of a lobster-red or mahogany-brown complexion was considered a very desirable badge of the Summer's outing. But common sense has taught us that very deep sunburn always causes more or less permanent injury to the texture of the skin; and deep blistering may result in serious dermatitis.

Persons unused to much walking, usually get blistered feet on their first few long "tramps." Unless the walking-boots fit well, and have heavy soles, the arches of the feet may break down also.

Boots for rough wear, for both men and women, should be thick-soled, broadheeled, with heel coming well under the instep; and should have a bellows-tongue, to prevent entrance of water. A good water-proofing liquid should be applied before worn the first time, to soften and preserve the leather, and to make them impervious to moisture.

For woman's wear, for tramping, boating, and fishing, the dress should have a short skirt, reaching only to tops of boots; and bloomers for wear under the dress-skirt, are much more comfortable and sensible than petticoats.

The use of a good foot soap is to be recommended to all who engage in out-of-door sports. Blistered feet are at least very painful; and also liable to get infected, and cause more serious trouble.

The foot soap, used as directed, will usually prevent blisters; but if they do form in spite of this, they should be dressed twice daily, with a bit of absorbent cotton, smeared with some good ointment as resinol, boric acid, or unguentine; and the cotton held in place by strips of surgeon's plaster.

A saturated solution of epsom salts is excellent for poisoning of ivy. The poisoned surfaces should be often bathed, or covered with compresses wet in the solution.

If one is to camp at a distance from medical aid, it is always best to go equipped with an emergency outfit. The family doctor should be consulted as to desirable antiseptics, liniments, ointments, headacheremedies, and digestive remedies; but certain simple and harmless applications I may suggest as a routine outfit.

The following articles and remedies will be found practical:

Surgeons' plaster; absorbent cotton and surgeons' gauze; some good antiseptic ointment; three, 5-yard roller-bandages; an alcohol stove and denatured alcohol to burn in it; a fountain syringe; hot-water bottle; thermos bottle; tincture of iodine;

mustard; witch hazel; grain alcohol; spirits of camphor; peroxide of hydrogen, or dioxogen; brandy; aromatic ammonia; compound tablets of rhubarb and soda; chemically-pure glycerine; epsom salts; castor oil; spirits of turpentine; several cakes of good foot-soap; powdered borax; some safe headache remedy, and digestive agent (both of which should be prescribed by a physician); pure aqua ammonia; a large jar of white vaseline; a good supply of soothing complexion-lotions, and a large bundle of soft, clean cotton cloth and wool flannel.

A solution made by adding one teaspoonful of tincture iodine to one quart of boiled water, is one of the safest and most effective antiseptics in which to soak a wound. As a final dressing, the full-strength iodine should be painted around and over the wound, and a dry, clean compress bandaged on. This dressing may be renewed each day, until the wound is healing well.

For indigestion, one teaspoonful each of ginger and baking-soda, is effective. Two compound rhubarb and soda tablets, repeated every two hours, will relieve bowel-trouble, colic caused by intestinal indigestion, or fermentative indigestion.

For insect stings and bites, apply saturated solution of epsom salts, pure glycerine, diluted aqua ammonia, or spirits camphor.

For sore throat, use a gargle of one part peroxide of hydrogen or dioxogen to three parts of water; or borax-water, or borax and glycerine.

A mixture of one part spirits turpentine to six parts of white vaseline, makes an effective outward application for sprained joints, muscular rheumatism, neuralgia, colic, cold in chest, croup, or over a bruise if the skin is not broken. After

rubbing it well into the skin, the painful area should be covered with hot, moist flannels; using care not to burn the invalid.

In depression from heat-stroke, weak heart-action, or other accident, a teaspoonful of aromatic ammonia may be given to an adult, and one-quarter teaspoonful to a child. It should be diluted with one-fourth glassful of cold water.

Glycerine and grain alcohol form a very soothing application for deep sunburn. Saturated solution of epsom salts (all that will dissolve in the desired amount of water) is a good application for ivy poisoning, burns, or other inflammations of the skin. It should be applied on soft cloths, renewed as soon as dry.

Mustard may be urgently needed for a paste, plaster, or an emetic. One table-spoonful in a glassful of tepid water forms an effective emetic.

Festering or suppurating wounds, or stings of insects, may be treated with pure peroxide of hydrogen, or dioxogen.

A daily painting of the painful or lame area, with tincture of iodine, relieves rheumatic and neuralgic pain and lameness, soreness in the chest, and sprains.

In heat-stroke or sun-stroke, an ice-cap should be applied to the head; aromatic ammonia given, and a hot-water bottle put at the feet.

A mixture of equal parts of castor oil and glycerine makes an ideal laxative, and often corrects summer-complaint in young children

So much for the emergency outfit for campers; but,—

"'Twere wisdom to retain the health we have,
By using just a Grain of Common Sense."

NURSING FIVE GENERATIONS IN ONE FAMILY.

THERE are many smart people in this progressive age who honestly doubt the existence of any real virtue in the "family nursing" of the sick which still survives, we are told, in certain old-fashioned communities—mostly in the country and in backwoods towns where the modern graduate has not yet come to stay. The same distrust is extended in full measure to each and every "practical" woman who presumes to tend the sick without the preliminary hospital service which wins the all-conquering diploma.

Before allowing our admiration of the graduate to run away with our judgment we should pause just a moment and reflect. Some one cared for the sick—even for some of us—before graduate nurses were subject to hurry-up calls by telephone. Some one, untrained and long since forgotten, cared for our parents and grandparents, and excellently, too, as results proved.

Our readers who have followed with interest the enlightening address of Mr. Bradley, in the last two numbers of The GAZETTE, and who feel the force of his plea

for "organized neighborliness," will read eagerly the following sketch which we take from an old number of *The News Letter* entitled:

"OLDTIME NURSING IN NEW ENGLAND,"
By Alfred Worcester, M.D., of Waltham,
Mass.

"Besides the joyfulness of recoveries, there were then as now the joyous welcomings of new life into the world. Upon such occasions the neighbor nurse we are remembering was superb. Her previous calls upon the expectant mother were not for condolence but to congratulate and encourage. She used to say that there was a heavenly mother and child companionship that could then be realized by those who made light of their discomforts, and that there was a special safeguarding of those

that are willing to be gently led.

"Well do her children remember her many a time returning after perhaps several days' absence, not exhausted as would be expected but exhilarated by having shared a new mother's joy that a child was born into the world. To one of her sons, who she prayed might be a physician, she used to tell how great opportunities a good doctor has at such times of helping where help is sorely needed, and when in later years occasionally he had his own mother as his obstetric nurse, when he realized her unstinted devotion of heart and soul in lending her own splendid strength to the laboring patient's relief, and when he saw her loving radiance in washing and dress-ing the new born child, his pride in scien-tific nursing was modified by his admiration for the old time neighborly nursing that now, alas, is fast disappearing.

"It is of course true that no people, no more than any individual, can ever go backward, can ever repeat the past; but that does not involve the sacrifice of one's whole inheritance. It is a thousand pities that modern nurses, instead of scorning old time nursing as of no possible value, have not sought out and garnered for the use of future nurses all that was known of the art before training schools began.

"The first specialization of nursing in New England was, as we have just seen, the choice of some in the community who were by common consent held to be especially fitted for such neighborly service. It was left for them to select and to teach their successors. The young folks so selected were proud to be asked to assist

as night watchers, and thankful to be taught by their experienced elders.

"Then another step towards specialization was taken when working women were induced 'to go out nursing' for their living. Only poor widows and spinsters were thus commissioned. Such service at first was only occasional. Between their times of nursing they 'took in sewing,' or helped at house-cleaning, or busied themselves in their own small homes. These women became the professed nurses, the experienced nurses, or, as they now best like to be called, the untrained nurses.

"They must not be compared with the wretched hospital nurses who preceded the training schools. They were an entirely different set of women. Thoroughly respectable and trustworthy they were always, often kindhearted and hard working, and sometimes teachable. Many of these untrained nurses are still in active service and doing very good work. Indeed, in only a few of the smaller country towns have modern trained nurses made any headway in displacing these "old-timers," and in the cities they are still the only dependence of moderately well-to-do families; but they are fast passing off the stage. Who will take their place? Who now will learn to do such work as theirs, for such modest wages as they command? This is a most serious question for sociologists.

"As the untrained nurses have so often been maligned, nicknamed after that monster Sairey Gamp, and used as a dark background for the graduating-day laudations of modern nurses, it seems only fitting in this sketch of New England nursing to describe at least one of them as she was known and loved in this neighborhood.

"Her name was Mary K. Green, and her little gravestone says she died in 1884, aged 73 years. She was born in one of the up country villages of Massachusetts, the oldest of seven children, on a poor farm where it was a hard struggle to get food enough for the family. When Mary was only twelve her mother died, leaving a baby daughter, Ruth, with five brothers in between. For four years Mary did all the housework for this family. She then started out to earn her own living and to help support the old home. She found work in a farmer's family in Waltham, where she slaved from four in the morning until well into the evening. Besides the ordinary housework, as it now is counted, she had the churning and cheese

making, the poultry raising and the kitchen gardening to do. For the first year she had ninepence a week, for the second year a shilling, and then, when she went to live with another family, 'Marm Fiske' gave her a silver thimble, which for long years was her most treasured possession.

"In her new situation she had an easier time of it. But, besides the ordinary work of the farmhouse, she had the care of the old grandfather in his dotage, and of many of the little grandchildren who were sent back from their city homes to build up in the country, and she was also often called upon for a few weeks' special service in one after another of the daughter's homes when there was sickness or any extra stress. As the grandchildren grew up and married she extended her visiting services to their families, and before her labors ended she cared for many of the great grand-children's children. Her service to this one family was thus given to five generations.

"All of her scanty wages went to the support of those of her own family who continued desperately poor. She provided a small cottage home for her only sister, who for many years was a hopeless consumptive. From the families where she worked she collected all sorts of no longer wanted material, which she always declared would be of use in the old up country home. At making over worn out garments she was a past master. She was never much on style. To her a button was a button, and if she could not find two alike for the garment she was making over, it mattered not, she would make their buttonholes of different sizes to fit. She was always in a hurry in the long days from dawn till dark, and, in winter, from the hour of summer sunrise throughout the short days and long evenings. On Sundays she went "to meeting" and thoroughly enjoyed it. In her six days of unremitting labor she well earned her Sabbath rest. Her religion was of the practical sort,-kind to everybody, devoted to the helpless, rigidly honest. A terribly hard worker she was, but a great lover of fun, never over-awed by 'stuck-up folks,' a perfect mine of quaint stories and of good old Yankee common sense.

"For the last half of her life Mary Green was an 'untrained' nurse. How did she become one, and of what sort was her nursing? During her early years the only nurses were the neighbor nurses already described. Often in the families where she was working she served as an assistant watcher; but it was not until she was of middle age that she was taught the art of nursing. Nor was she in any hurry to undertake this responsibility. But finally she was persuaded by an expectant mother, who promised to teach her what nursing she herself would need, and then would recommend her, and teach her at these cases what nursing was needed for them.

"In this way Miss Green, as she then came to be called, was launched into her nursing career. After her long preparation of helpful service, it was no wonder she soon became a famous nurse. Fortunate indeed were the families that found her in their times of need. For not only would she do the strictly nursing work in tending the patient, but she also delighted in doing the family washing before breakfast, the ironing in the forenoon, and the mending before or after nightfall, with the baby on her lap. Much of the cooking and general housework she would do between times. The amount of her day's work was astounding, nor were her patients ever neg-

"While faithful to old doctors whom she knew, and always punctilious in giving the medicine as ordered, she was a terror to the younger physicians for whom she had little use. To one of them, who incautiously asked 'how is your patient?' her snappy answer was, 'that is for you to find out'; and again when he asked if the fine breast bandage, he had so proudly applied the day before, had proved a comfort, she admitted she had taken it off directly after he left the house. She 'didn't like them things,' she added.

"For the clinical thermometer, and for modern antiseptics, she had supreme contempt. Soap suds were cleansing enough for anybody sick or well, she would say; and as if any fool ought not to be able to tell without thermometers whether the patient or the chamber were too cold or too warm.' It was no use to allow fruit or any other 'outlandish diet' to her patients. She believed in gruels and broths, fresh air and perfect quiet. What she believed in would be given; and nothing else. 'If you want any other kind of nursing, get it,' was her ultimatum.

"Though she died long years ago, after a day or two of pneumonia, she is still missed, and she deserves a more fitting memorial."

nemoriai.

Ouestions and Answers.

The following answers are not "official." They are prepared for the editor.

University of the State of New York, 21st Nurses' Examination.

MEDICAL NURSING AND NURSING OF CHILDREN.

Tuesday, January 27, 1914—9.15 a. m. to 12.15 p. m. only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. What articles should the nurse provide

before giving a child a bath?

Ans. Castile or lanolin soap, olive oil, vaseline or benzoinated lard, dusting powder, small squares of soft cloth, umbilical dressing for the new-born, warmed clothing, towels soft and warm, foot-tub containing water at temperature of about 105° Fahr.

2. Outline the general nursing care of a case of whooping cough in a four year old

child.

Ans. Isolate the child until recovery; at the same time give him all the fresh air possible, keeping him out of doors when weather permits. During febrile stage keep in bed. As vomiting is almost inevitable, give easily digested, nourishing food at frequent intervals and in small quantities, to avoid overloading of the stomach. The child's surroundings should favor quiet and rest as the cough is likely to be very exhausting and child needs to recuperate strength every day. A well fitted abdominal binder is of great use.

3. What special qualifications should a nurse who has the care of sick children

possess?

Ans. Honesty and common sense come first. Gentleness, tact, patience, and quiet manners are desirable. The faculty of getting on with children, amusing them and keeping them occupied, includes all of the above—and more.

4. What are the bad effects to be watched for and guarded against in giving hot packs

or baths?

Ans. Faintness, over-heating, exhaustion,—soft, compressible or intermittent pulse,—pallor of lips and face, air-hunger, restlessness, burns and scalds.

5. Mention four bad effects that may result from neglect of a fever patient's

mouth.

Ans. Sordes, dry and fissured tongue, ulcers, infectious foci from which other organs may become septic.

- 6. What is marasmus? Give symptoms. Ans. Progressive wasting, especially of infants; pedatrophy. Starvation symptoms, emaciation, senile appearance; superficial breathing, bad pulse; weak, whining cry; exhaustion.
- 7. Name important points in the nursing care of marasmus.

Ans. Good air, out of doors if possible; good food, breast-milk if possible; cleanliness; oil massage; warm, comfortable clothing; the best of nursing care. Weak and delicate babies are sometimes trotted to death in efforts to amuse or quiet them.

8. What are the *three* most important considerations in the nursing of all forms

of anemia?

Ans. Proper food, fresh air, prolonged rest with careful nursing care.

9. How should catheters be prepared for use?

Ans. Rubber catheters: Insert small funnel and wash 2 minutes in running cold water; soak in cold water 3 to 5 minutes; scrub in warm suds; rinse in cold running water; wash in weak formalin solution (2% to 3%) running it through with funnel; soak in same solution ½ hour; rinse in cold water; boil 3 minutes; dry and put away. Before using again, boil 3 minutes and keep in boric acid solution or sterile towel. Glass or metallic catheters, after

10. Mention some points to remember regarding the care of the catheter while

cleaning well, are boiled ten minutes before

putting away or using again.

catheterizing.

Ans. The catheter should touch nothing that is not surgically clean. It must be handled with gentleness—not forced. In a female the vulva must be kept well parted so as not to touch the catheter. When urine begins to flow the catheter must not be pushed farther. When flow stops, the catheter should be slightly withdrawn and held a moment until flowing ceases again. In removing the catheter, the outlet must be stopped by the finger to prevent spilling the last few drops of urine. It is well to prepare two or more catheters for use in

order that a clean one may be at hand in case of soiling or contaminating the first one. Glass catheters are wet in boric acid solution before inserting. Rubber or metallic catheters are lubricated with a little sterile oil or vaselin.

11. How would you take a throat culture?

Ans. First see that no antiseptic gargles or washes have been used for at least two hours past. Seat patient in good light with mouth wide open. Control tongue by tongue depressor held in your left hand. sterile swab in right hand and pass to the throat without touching tongue or lips or teeth and swab the area intended, with a rotary motion so as to bring all sides of swab into contact with area. Remove swab without touching any part of mouth or Remove tongue depressor. culture tube in left hand and remove cotton plug, holding it between the middle finger and ring finger of the right hand; then insert swab into culture tube and rub gently and thoroughly over culture medium, taking care to spread the substance on swab well over the medium but not to puncture the medium. Insert cotton plug into culture tube and replace swab in the container and plug as before using. During these manipulations the swab is held constantly in the right hand and not allowed to touch anything but the throat and the culture medium. After taking culture be sure that it is properly labeled and prepared for sending to the laboratory, and that the swab is so disposed of that it will not be used a second time.

12. Mention *three* special points in the

nursing of dysentery.

Ans. Put on flannel binder and keep patient warm and quiet; give bland liquid diet; keep patient strictly clean and sterilize all discharges as well as all utensils and instruments used in the case.

13. What are the signs of hemorrhage in

typhoid fever?

Ans. Sudden faintness, pallor, rapidly increasing pulse-rate, air-hunger, falling temperature, passage of tar-colored stools or blood clots.

14. Describe the appearance of blood in hemorrhage from the lungs. Define the nurse's duties in such an emergency.

Ans. Bright red and frothy. Put patient to bed immediately, with shoulders elevated; give abundance of fresh air—out of doors if possible—and keep patient quiet as possible and free from alarm. Give cracked ice by mouth. Keep the feet and legs warm. An ice bag over the chest may check hemorrhage, or it may aggravate the cough. Send for the doctor, and have ready a quantity of warm, sterilized, normal salt solution in case the doctor should order its use.

15. Briefly outline the general care of a child having any contagious or infectious disease.

Ans. Isolate patient until all danger of contagion is passed. Thoroughly disinfect all discharges from patient and all materials and articles that have been used about the patient. Allow no foods, medicines, or other things to be taken from the sick room to other parts of the house, except for destruction or sterilization. The nurse must exercise the same care in regard to her own person and clothing, to avoid infecting herself or those whom she meets outside the sick room. Patient must be kept scrupulously clean, particular attention being given to skin, mouth, throat, and any wounds or abrasions of the body. More than usual care must be given to feeding, elimination and general welfare.

OBSTETRIC NURSING

FOR FEMALE NURSES.

Wednesday, January 28, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 creaits. Papers entitled to 75 or more credits will be accepted.

1. What antiseptic solutions should be prepared for use in the care of the mother and the newborn infant?

Ans. This depends upon the doctor and the nature of the case. Probably boric acid solution will be in demand. The other solutions that may be wanted are: bichlorid of mercury, carbolic acid, lysol or creolin, formalin, chinosol, alcohol, silver nitrate, argyrol, or some other silver salt.



2. Give the strength of each solution

mentioned in answer to question 1.

Ans. Bichlorid of mercury, 1:1000 or 1:1500. Carbolic acid, 5 per cent. Lysol, 1 per cent. to 2 per cent. Creolin, same as lysol. Formalin, ½ dram to 1 dram per pint of sterile water. Chinosol, 1:500 to 1:2000, according to use intended. Alcohol, 75 per cent. Silver nitrate, 1 per cent. Argyrol, 10 per cent.

3. Describe the brim of the pelvis.

Ans. The edge of the superior strait of the pelvis is called the brim, or inlet, and marks the junction of the false pelvis above with the true pelvis below. The pelvis narrows at the brim, and is shaped like a flattened heart, with the broadest diameter from right to left. The brim is formed behind (dorsally) by the promontory and wings of the sacrum; laterally and ventrally by the two innominate bones.

4. Give a full description of the structure and the function of the Fallopian tubes.

Ans. Two tubes about four inches long and about the size of a crow's quill, lying between the layers of the broad ligament, and extending from the superior angles of the uterus to the sides of the pelvis. The uterine end of the canal is of extremely small calibre, and about two inches from the uterus it gradually widens, forming a trumpet-shaped abdominal opening with fringed edges, called the fimbriated extremity. One of the fringes, in each tube, is attached to the ovary. The tube is made up of three principal layers; the serous layer is on the outside; next is the muscular layer made of longitudinal and circular fibres of involuntary muscle; inside is the mucous layer which is lined with ciliated columnar epithelium, from the fimbriated extremity, which communicates with the peritoneal cavity, to the opposite end which opens into the cavity of the uterus. Thus, the tubes are the only structures in the body forming direct connection between a mucous They are oviducts, and a serous cavity. their function being to convey the ovum from the ovary down to the uterus; the ciliated epithelium lining the tubes wafts the ovum in the direction of the uterus.

5. Define (a) mastitis, (b) primipara, (c) puerperium, (d) obstetrics, (e) embryo.

Ans. (a) Inflammation of the mammary gland. (b) A woman who is the mother of but one child. (c) The period of confinement; childbed period. (d) The science and art of assisting women through pregnancy, labor and the puerperium; the

art of midwifery. (c) the fetus before the end of the third month of development.

6. Give the three stages of labor.

Ans. First, from the beginning of laborpains to the complete dilation of the mouth of the womb, and called the period of dilation. Second, from complete dilation of the cervix to complete expulsion of the child, and called the period of expulsion. Third, from the expulsion of the child until the expulsion of the after-birth and the contraction of the uterus, and called the placental stage.

7. What is meant by a "blue" baby?

Ans. An infant affected with cyanosis; strictly speaking the term applies to cases of congenital heart disease.

8. Give the symptoms of puerperal infection.

Ans. Malaise, chills, fever, rapid pulse; usually pain around the uterus, alteration of lochia, or stoppage of lochia; signs of suppuration or peritonitis may develop.

9. Describe the routine care of a patient on the eighth day after a normal delivery.

Ans. Patient remains in bed all day, except while using the commode. At about 7 o'clock the breasts are inspected and the child nursed. After this comes breakfast and the usual morning care of the mother, the bed and the room. The mother has a full bath or a sponge bath with alcohol and water. It is well to follow this with gentle massage. The room is well ventilated and well lighted. Visits of friends are very much restricted in number and length. The nurse takes temperature, pulse, and respiration three times and records them on the She also keeps record of history-sheet. patient's general condition, sleep (in hours) diet, bowel movements, urinations (noting amount), use of catheter and enema, lochial discharge, administration of medicines, doctor's visits, and other items of importance. In particular: the breasts are examined to see that they are free from abnormal conditions, kept clean and comfortable; the nipples are cleansed with boric acid, not touching them with the hands if it can be avoided; if the hands must come in contact with the nipples they are first scrubbed until aseptically clean. The baby is nursed every three hours, the nipples being cared for each time in the routine manner. Two or three times in the day the vulva is inspected, cleansed and covered with a clean aseptic pad. The discarded pads are kept for the doctor's inspection. If nurse soils her hands with lochia she must disinfect

them at first opportunity, and before touching the baby or the mother's breasts. The mother may have mixed diet of plain, easily digested food, and should drink an abundance of water.

10. Outline the daily care of an infant eight days old.

Ans. At about 7 o'clock the baby is put to the breast, and every three hours through the day; twice in the night ought to suffice for feeding. The mouth should be cleansed before and after nursing, using boric acid solution, without friction or other injury to the mucous membrane. A sponge bath is given in the morning followed by the usual care of the skin. The umbilical cord is inspected and dressing renewed if soiled or in need of renewal. The eyes are inspected and the lids wiped gently with cotton soaked in boric acid solution, unless a more active treatment is needed. After the bath the child is weighed. Between feedings he is given water to drink. The child spends most of the day, while quiet, in the room with its mother, but at night is taken to another room where its cries will not disturb the mother's rest. The nurse keeps a history-chart on which she records daily the temperature, pulse, respirations, weight. sleep, nursing, crying, times of urinating and movements of the bowels. Any medicines or treatments given must also be recorded. The nurse must see that the child is kept warm and dry, and does not suffer from neglect.

11. What is the nursing treatment for

enlarged breasts in an infant?

Ans. Bathe, anoint gently with camphorated oil, cover with pad of cotton and cover firmly with binder. Handle child carefully to avoid injury to breast and in a week or less the enlargement will have been cured.

12. Describe the nursing care of ophthal-

mia neonatorum.

Ans. If one eye only is infected, cover the well eye with cotton kept in place by adhesive plaster; inspect the well eye every four hours for signs of infection; tie baby's arms to his sides to prevent his rubbing eye and infecting other places. Apply ice cold pledgets to eyes, changing every minute. Frequent irrigations may be given with boric acid or normal salt solution, using a fountain syringe. Applications of silver nitrate, argyrol, protargol, atropin, etc., may be required at longer intervals. Treatment of this form of ophthalmia requires continuous, thorough work, often for days at a time, and is enough to keep two nurses They must be extremely cautious about touching their own eyes without first sterilizing their hands thoroughly.

13. State the nursing care after a primary perineorrhaphy.

Ans. Be careful not to pull on stitches and thus irritate the wound or perhaps open it. If ends of stitches cause pain, wrap them in sterile gauze. If the vulva is sore and swollen, apply compresses soaked in warm boric acid solution. Cleanse the wound and surrounding parts occasionally with soap and water and report to the doctor any unfavorable conditions.

11. Give the care necessary for the infant's feeding bottles and nipples.

Ans. Clean bottles and all other utensils used in preparing food, using soda solution and a brush. Rinse and sterilize. After filling, plug with cotton and sterilize again. Cool quickly and keep on ice till needed. Nipples, after use, are washed well in solution of soda carbonate, turned inside out, boiled five minutes or longer, rinsed and kept in boric acid solution until needed.

15. What is an ectopic gestation?

Ans. Pregnancy in which the embryo is not inside the uterus.

GENITO-URINARY NURSING.

FOR MALE NURSES.

Wednesday, January 28, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. Define (a) hypospadias, (b) epispadias.

2. How would you prepare a patient for removal of vesical calculus?

3. What could a nurse do to relieve the pain of a prolapsed anus?

4. What is the lithotomy position.5. What is incontinence of urines

- 6. Give some results of carelessness in catheterizing.
 - 7. What are the symptoms of cystitis?
- 8. What preparation should the nurse make for the doctor in a case of urethral stricture?
 - 9. Describe irrigation of the bladder.
- 10. What is genito-urinary surgery and what organs are considered in this branch of surgery?
- 11. Why does not the urine return to the kidneys when the bladder is much distended?
- 12. How are the various kinds of catheters sterilized.
- 13. What is the minimum period of incubation of syphilis?
- 14. What is the maximum period of incubation of syphilis?
- 15. What is the average period of incubation of syphilis?

MATERIA MEDICA

Wednesday, January 28, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. Define (a) decoctions, (b) infusions,

- (c) tonics, (d) syrups.
 2. What is the ordinary dose of croton oil and how should it be administered?
- 3. If a strength of m v represents gr. 1/150, how many minims will be required to make a dose of gr. 1/60?
- 4. What is the dose of syrup of ipecac for an infant?
- 5. How many drams are there in 2/3 of a pint?
- 6. What in fluid measure is allowed as the equivalent of the liter?
 - 7. Express in full (a) b. i. d., (b) q. h.,
- 8. Mention (a) one hypnotic, (b) one stomachic, (c) one purgative. State the usual dose of each.

9. In giving drugs to produce sleep, mention three conditions that should be secured in order to make them effective.

10. How much mustard to a teacup of water should be used in order to produce emesis? If necessary to repeat the dose. how often and how many times should it be repeated?

11. Mention a drug having a cumulative

action.

12. Mention one medicine that should always be given through a glass tube.

13. What are the toxic symptoms of hydrated chloral?

14. Define (a) antiperiodics, (b) carminatives, (c) anesthetics.

15. Mention (a) a drug that will produce dilation of the pupil, (b) a drug that will produce contraction of the pupil.

Have your answers to these questions ready for comparison with the answers to be given in a later number of THE GAZETTE.

No Wood in the Up-To-Date Kitchen. -It is entirely practicable, with presentday methods of construction, to avoid the use of wood in a food-producing establishment.—Chicago Sanitary Bulletin.

THE BEST LIQUID BEEF.—If one really wants "liquid beef," the only genuine way of getting it of any value is to press out the juice from a fresh piece of beef and prepare it as wanted.—Literary Digest.

Constipation is a Sin.—Constipation, the bane of civilization is generally the result of neglect of the bowels and of wrong eating; and cathartic medicines, through abuse have become a plague.—Monthly Bullctin, Indiana State Board of Health.

A FLYLESS TOWN.—Time was when the extermination of mosquitos or the elimination of the fly were considered a huge joke. But time has shown what can be done.

Everybody can help to make Buffalo a flyless town by:

Keeping premises clean so that all breeding places are eliminated.

Buying at least one fly trap and keeping it working during the fly season.

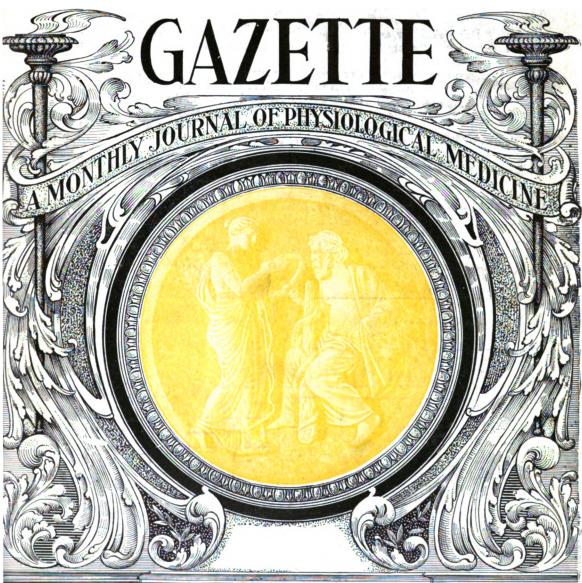
That's all there is to it.

What's the use of "swat" one fly and let a million escape?

Better watch the million than to swat the one.—Buffalo Sanitary Bulletin.

THE

DIETETICANDHYGIENIC



PUBLICATION OFFICES

87 Nassau St.

- New York

\$1.00 Per Annum. 15c. Per Copy.

Entered as Second-Class Matter at the New York Post Office.

The best antiseptic for purposes of personal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teeth.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts

water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY

LOCUST AND TWENTY-FIRST STREETS :: :: ST. LOUIS, MO.



RAPIDLY
GETTING
INTO
EVERY
HOSPITAL
ON
EARTH

CHINOSOL is a more powerful antiseptic than bichloride, non poisonous, no injury to hands or membranes, no smell, instantaneous deodorant, no damage to tissues, a pronounced analysetic.

ACCEPTED BY COUNCIL ON PHARM. AND CHEM. A. M. A.

POWDER, TABLETS, ASEPTIKONS
SAMPLES AND CLINICAL REPORTS ON REQUEST

CHINOSOL CO., 54 SOUTH ST., N. 1



THE

DETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A. M., M. D.

Vol. XXX.

1

6

SEPTEMBER, 1914

No. IX

EDITORIALS.

EUTHANASIA.

It may be recalled how in a dreadful railway accident a man crushed under the engine implored that he be killed in order for the ending of his agony. A surgeon mercifully passed chloroform to him so that by breathing it his sufferings could be alleviat-He died, in all likelihood not of the chloroform, but of his injuries. About that time "Brother" Gillette of the Shaker Colony at Ashton, Florida, was imprisoned on the charge of "assisting out of this life "Sister" Marchant, and he was freed because the grand jury would not indict either him or "Sister" Sears, who admitted with him, that they had chloroformed Sister Marchant. They maintained that they had a moral right to do this by reason of the great physical suffering of the aged Sister Marchant. "So pitifully did she plead, and so great appeared her agony" that this "brother and sister," after conferring with others of the Shaker Colony, decided to "help her." Two ounces of chloroform were poured on a cloth, the aged woman gave the signal that she was ready, and then she allowed the cloth to be spread over her Many people defended this euthanasia.

Maurice Maeterlinck, a very profound and moving writer, has in his book, "Death," reopened this most pregnant question of euthanasia. He declares that all our knowledge helps us to die in greater pain than the animals that know nothing. As science progresses it but makes for a prolongation of the agony of death-the most dreadful and the sharpest peak of human pain and horror, at least for the witnesses. "All the doctors consider it their first duty to protract as long as possible even the most excruciating convulsions. Who has not, at a bedside, twenty times wished to throw himself at their feet and implore them to show mercy. "The prejudice (believes Maeterlinck) against the arbitrary induction of a painless and premature death will one day be regarded as barbarian, as "a relic of the times when humanity was convinced that any known torture was preferable to those awaiting us in the unknown;" and he predicts that a day will come when science will no longer hesitate to shorten human misfortunes; "when life, grown wiser, will depart silently to its hour, knowing that it has reached its term, even as it withdraws every evening as we sleep, knowing that its day's task is done."

Now, Maeterlinck writes like a poet and a mystic; it is very probable, indeed, that he knows nothing or very little, indeed, of the practical aspects of suffering, such as physicians have every hour to deal with—else he would surely not urge such dreadful responsibilities upon physicians as he does in his fascinating book, nor is he in his writing quite accurate. To relieve pain is the first thing a practitioner will do; and to the extent, at least, that the life of the patient

will not be jeopardized by the amount of the anodyne. And this the physician is ever eager to do: first, because there is nothing so killing as pain nor anything so destructive of the patient's vitality; and secondly, because there is nothing so distressing to the on-looker as a fellow mortal suffering excruciating torture.

Nor are physicians hardened men; there is no class of men more genuinely sympathetic. None but a compassionate physician can maintain a practice; because nobody wants to engage any other kind of a man. The span of the physician's life averages shorter than that in most other callings; and this, undoubtedly, because the sufferings of their fellows takes so much out of them; and it is not essential even to prolong any convulsions; and there would never be the slightest occasion for anyone to implore the physician (with or without genuflexion) to alleviate sufferings.

A most vital consideration (and one which always proves conclusive in sane discussions of the euthanasia question) is that neither the physician nor any other mortal can ever be sure of an infallible prediction of a fatal issue in any case. People that have suffered from seemingly irremediable illnesses have nevertheless lived to make physicians wish with all their hearts they had not been as positive in their untoward prognoses. To err in such predictions is human; and physicians are of all creatures the most human, as they are the most humane: only divinity can foretell unerringly the hour, the day or the year of anyone's death. Indeed, a woman who a year ago was begging for euthanasia has since left the hospital ward, and is glad she is alive.

What mortal, then, has any right to hasten any death upon his finite assumption of its inevitableness. Consider what a weed-choked field of evil possibilities would be cultivated were the opinions expressed so alluringly by Maeterlinck to prevail; were physicians, upon the plausible pleadings of heirs or other interested people, to assure the helpless sufferer "a gentle and easy death" before his appointed time. It is for such reasons as these that physicians must ever be on the negative side of the euthanasia question.

THE PHYSICIAN AS SPEAKER.

EVERY physician comes upon interesting data which would be most useful to his colleagues should he choose to make them Excellent opportunity for doing this is provided in medical meetings—as in those of societies which are held periodically in small halls or in the parlors of public libraries, or in the homes of members. Yet how frequently is the following experience reduplicated: In a meeting of some thirty practitioners a well-prepared paper on a subject about which every doctor knows something was read, yet when the presiding officer called for discussion there followed a silence such as can normally obtain only in Polar wastes and a gloom such as must have environed that craft which Charon is fabled to have piloted across the Styx. In a most praiseworthy effort to break this solemn

silence and to dispel this gloom the president then called upon each physician in turn. The first seemed to duck as if he were fending off a blow, and then responded with a sickly grin and that hoary sentiment about the writer having so fully covered his subject, he (the hearer) had nothing he could add. And so on seriatim down the line. Is not all this, indeed, a sorry compliment, and poor thanks for his labor, to a colleague who had gone down deep into his experiences, and who had given hours of research to the preparation of a real addition to the profession's thesaurus? It is the physician's duty to add what he can in the discussion of such papers.

Again, there are now many lay assemblages in which matters of the communal health are ventilated; it is oftentimes diffi-

cult to get medical men to take part in these meetings. Yet here is a physician's duty, as apart from his private practice; especially by reason that he knows more about the subjects under discussion than any other individual in the body politic, although we have known some laymen to think otherwise.

And these evasions are generally from no other cause than a timidity—which sometimes amounts even to terror—at the idea of "getting up in meeting" and saying something to the point; it has been well observed that no man, shipwrecked on a desert island, without so much as a cannibal for company, is so utterly alone as one at a public function during the first few moments that he gets on his feet. It is in the hope of dispelling such diffidence that the following suggestion is respectfully offered those colleagues unaccustomed to speaking.

Public speaking is not to-day in the oratorical style which Webster made so famous; that which now generally obtains is in the colloquial, the conversational style. He who can speak distinctly, agreeably and coherently at a dinner table or in a sittingroom is qualified to address an assembly of ordinary proportions. All he needs is the courage he ordinarily evinces in his everyday affairs; having this he shall certainly triumph and not fail. It is apropos by way of "innocent merriment" and intending no disrespect to any creature, human or otherwise, to quote Carlysle:

"The speaker is as the ass whom you took and cast headlong into the waters. The water at first threatens to swallow him, but

he finds to his astonishment that he can swim therein, that it is buoyant and bears him along. One sole condition is indispensable—audacity, vulgarly called impudence. Our donkey must commit himself to his water element, in free daring strike forth his four limbs from him. Then shall he not drown and sink, but shoot gloriously forth and swim, to the admiration of the bystanders. The ass, safely landed on the other bank, shakes his rough hide, wonder-struck himself at the faculty there is in him, and waves joyfully his long ears. So, too, the speaker."

The physician who is called upon to make a brief address in public will be armed at all points if he will beforehand make a sensible and harmonious arrangement of the various parts of his subject; and if he will then jot down in logical order the section or paragraph headings he cannot go amiss when he stands before his auditors.

If he have beforehand clearly thought out his address, he will be an adequately good (though, perhaps, not a great) speaker; for "our voice is where we are thinking." Of course, one may read his discourse, but this is never so effective or so inspiring as speaking straightforwardly. A heavy meal should not be taken before the occasion; wines have been known to befuddle the intellect to a disastrous degree; a cup of good tea is an excellent incentive to reasonable speaking; and a nap of half an hour before the meal (that is to precede the speaking) will wonderfully clarify the brain.

Gestures may be left altogether to take care of themselves; for the earnest speaker (and he who is not sincere had best not venture to address an audience) will subconsciously gesticulate in conformity with his ideas. And if one is to speak half an hour or more an anecdote or two will never be amiss, if the story comes in pat with the subject matter.

THE TUBERCULOSIS SANATORIUM.

When I bought the first land on which the Adirondack Cottage Sanatorium is built I paid \$25 an acre for it; but the price was then thought absurdly high. My last purchase of five acres cost me \$5,000. To my knowledge there has never been an employee who came to the sanatorium in sound

health who developed tuberculosis while there, and a sanatorium can no more endanger the health of the neighborhood in which it is built, even if the residences are at its very gates, than it could if it were placed on top of a high mountain, miles away from habitation."—Dr. Edward L. Trudean.

WINGED DISEASE CARRIERS.

"You may have noticed how the flea Has other fleas that on him prey; And these have others still to bite 'em; And so proceed ad infinitum."

THIS stanza was evolved out of the sardonic temperament of Dean Swift, long before there was any science of microscopic parasitism such as Pasteur and Koch founded. Possibly the Dean noticed (as have others since his time, ourselves included) a maddened blue-bottle darting frantically about, tiny mites fastened upon its body, and eventually, no doubt, destroying it. Anyway, the Dean's discernment of the infinitesimal degree to which the phenomenon obtains was remarkable; though probably not altogether intuitive as we shall see.

It is certainly a gruesome commonplace of existence-that any given creature can maintain itself only by living, one way or another, on some other creature. ning with ourselves, the highest developed, each kills and preys upon the successively less resistent life down to the end of the sentient scale. We humans, the more we have progressed in civilization, like to ignore all this; the most of us put it comfortably behind us by getting our fellow in the abbatoir to attend to the unpleasant part of it; when we breakfast on that dainty little lamb chop we quite successfully consign to oblivion, the fact of slaughter with relation to it. But the biologic truth holds all the same.

On the other hand bacteriology has revealed a veritable cosmos in parva, teeming with organisms which can exist only by parasitism upon, and much too often by destruction of, such life forms as are ordinarily visible. Most human life is destroyed, not by tangible entities—such as wild beasts or wars or violence or gross calamities—but by infection, by the agency of disease-engendering germs or fungi, in size microscopic, or indeed ultramicroscopic

(that is, beyond the almost infinite detecting power of the microscope, as at present perfected), we only know of their existence by the evidence of their living in, and feeding upon, and by their oftentimes killing of the bodies of their hosts. These germs we speak of as bacilli, or cocci, or spirilli, or bacteria, or fungi, or protozoa, or viruses.

Then, between the microscopic life on the one hand and the microscopic on the other, are creatures which make it a large part of their business to bring the two extremes into relation, congenial at least to the latter; it is these intermediaries, which are for the most part not themselves disease-breeders, but are rather infection-carriers, that we are to deal with. And they are certain insects, mostly domestic, and the most virulent foes to humankind that can be imagined

And how do these insects play their insidious, though probably not malevolent roles: (1) The germs may stick to their hairy legs and spongy bodies; or (2) the germs may be eaten by them and deposited upon human food and drink with their excreta (as in fly specks); or (3) the insects may eject germs from their mouths; or (4) the insects may die (no doubt from the germs they have absorbed, or from the poisons (toxins) evolved by the germs), and then the insects will dry up, crumble, be distributed as dust, and be either breathed in or swallowed by human beings; or (5) biting or stinging insects may inject into the host disease-laden blood which they have previously sucked from a human being or an animal already infected and sick with the given disease. The first four forms may be considered mechanical modes of transmission; the last (5) biologic, because the germ (as for example, the plasmodium of malaria) undergoes a life cycle in the body of the mosquito before that insect transfers the infection by injecting the plasmodium when it bites.

TOWN AND COUNTRY.

THERE has probably never been a time when the God-made country has not proved healthier than the man-made city. And yet more people die to-day of typhoid fever, malaria, influenza, dysentery, apoplexy, paralysis and heart disease in the country. Of these apoplexy, paralysis (which generally results from a "stroke"), and heart disease (generally associated with rheumatism), are "terminal affections"; that is, they are diseases of which people are reported—and correctly—in the burial certificates to have died, although there have been in almost every such case some antecedent disease or diseases suffered.

It is never wise to prophesy unless you know; all the same, it is a fairly safe prophesy that our children grown to maturity, certainly our grandchildren, will experience typhoid fever and malaria not at all. For, besides all the other preventive measures that will be practised against this disease, they will be vaccinated against typhoid as against smallpex. And the malaria mosquito is going to be banished from civilization, as soon as our people appreciate how easily the thing can be done, and at what little expense by comparison with the cost in means and suffering malaria occasions.

The diseases most rife in the city are cancer, alcoholism (though John Barleycorn has plenty of intimates in the country too), meningitis, bronchitis, the pneumonias. diarrhœa and enteritis, cirrhosis of the liver, appendicitis, Bright's disease and nephritis, and people die more in the city from violence.

And yet the cities have made amazing strides in sanitation since that pig sty period of which Dickens so potently complained, and with such good results that London's death rates now average one-half what they were in that most humane novelist's time. The simple truth is that urban health authorities have made far the greater application of the demonstrated principles of that Herculean babe in the family of the sciences—preventive medicine. To-day a hundred people exist in good health on a city plot where formerly ten people lived in constant peril of disease. Thus, since 1904 urban death rates in New York State have already decreased, whilst rural death rates have increased, until the metropolis has under-rated rural up-State; 13.7 per 1,000 of population as against 15.4. difference is considered to be mainly due to the greater rural prevalence of typhoid and tuberculosis (against which latter disease civic ordinances have not only been made but also consistently enforced). And if you put a monetary value on human life -say \$5,000 the individual, rural New York has most needlessly wasted in 1913 a matter of fifteen millions of dollars.

Strictly speaking the comparison just made is uniform to the country, with regard to tuberculosis any way; because the treatment of city consumptives is to send them to rural sanatoria, where many of them die, thus swelling the country death rate. At the same time their deaths are eliminated from the civic mortality tables, where they of right belong.

Still, after all allowances are made, the country districts are wofully behind cities in the application of modern sanitary principles. And that is why a division of Rural Hygiene is contemplated in the Health Department of the Empire State, which ought to have the backing for all it is worth and to the limit by every ruralite. The idea, for that matter, is worthy of emulation throughout the Federal Union.

"This towel is disgraceful," declared the drummer at the mining camp hotel. "Boss," said the colored porter, "seventy-five men done wiped dey han's on dat towel dis mawnin, an' you is de first to complain!"—

Denver News.

THE TONGUE IN DISEASE.

For examination the tongue should be protruded as far as possible, and the whole surface should be inspected. An abnormal appearance points (1) to fevers, (2) to local lesions, (3) to some disorder in the digestive tract, or (4) to various morbid conditions not included in the first three divisions.

- 1. In fevers the tongue is generally coated or furred, dry, sometimes fissued, and is apt to look dirty and the mouth to be bad smelling. In typhoid, when a brown, furred tongue becomes darker and thicker. and sordes appear on the teeth and lips. the conditions is serious. When the tongue begins to "clear up" we expect convalscence; when the coating re-forms, we fear The tongue is tremendous in a relapse. several fevers, where there is extreme ex-Occasionally there is an abhaustion. normally red tongue, due to denuding of the epithelium; this appearance may at times be detected beneath the coating.
- 2. A coated tongue may be caused by decayed teeth, or enlarged tonsils or excessive smoking. Other local manifestations are the mucous patches of syphilis, which especially in children, must not be confounded with the patches of stomatitis. Chancre may be found, or there may be circumscribed swelling and hardness, which would mean either syphilis or cancer, to establish the diagnosis between which it may be necessary to cut out a piece for microscopic examination. Depressed scars

upon the surface would indicate healed specific ulcers. We may find in epileptics scars due to biting the tongue. Finally the tongue may be stained by drugs, or acids or alkalies.

- 3. A furred or coated tongue occurs in disorders of the digestive tract. Constipation produces this; or a brown furred tongue with a bad taste may appear the "morning after" the patient has wined and dined generously. A coated tongue with a yellowish hue would draw attention to the liver. When the tongue looks raw, like beeksteak and of an unnaturally clean, smoothe and perhaps glazed appearance, it points to gastric or intestinal irritability; this means shedding of intentinal epithelium with consequent loss of power of absorption—a serious condition, for here the supply of nutritive material to the system is interfered with.
- 4. The color of the tongue is affected by that of the blood: thus, a pale, flabby indented tongue, indicates thin and poor blood, as in anæmia and chronic wasting diseases. It is said that a swollen and indented tongue, presenting also a sort of silvery sheen, suggests menorrhagia. The tongue is dry in diabetes and in other conditions where the bulk of urine is large. It is tremulous in chronic alcoholism, in many nervous diseases, and in aeld and mercuria poisoning. A tongue looking as if covered with white paint is characteristic of malaria. The "strawberry tongue" of scarlet bright red, with papillæ prominent.

THE SURGEON'S HAND—"HE MAKETH THE BLIND TO SEE."

MARY MURDOCK MASON, IN THE CENTURY.

BENEATH his wrist there stirs a sun-god's thought,

A strong magnetic current swiftly flows Through palm and finger-tip, and power bestows

On tiny blade of steel with promise fraught.

Up toward the eye the charged blade is brought.

Marble, moonlit, the arched corner shows. The iris, lying lakelike in repose,

And the deep pupil where the soul is caught.

"Let there be light," he says—"Let there be light."

And, solemn as the sign of the cross, the hand

Performs the miracle. At that command The pulsing thought leaps toward the blind man's night.

Symbolic, like a dove's flight to its nest, The haloed hand drops down and is at rest.

ORIGINAL ARTICLES,

THE CONSERVATION OF SIGHT AND HEARING.*

By Percy Fridenberg, M. D., New York.

Attending Ophthalmic Surgeon, Lebanon Hospital; Junior Surgeon, New York Eye and Ear Infirmary; etc.

Conservation of resources, of which we hear so much, deals with material things or at best with sources of power, and has mainly an economic bearing on the future. Conservation of human life and health and, -not the least important,—of eyes and ears has, as I will show, a great economis significance and far and away beyond this a vital and prophetic significance for the race and generations to come. To explain this I must go back and ask what uses are served by the eye and vision. It is not only to earn our daily bread that we need sight, but indeed to save ourselves from a hundred and one dangers not only of dramatic accidents, but of every day mistakes, slips, confusions and errors. To anyone who has tried to untie a knot in the dark, the importance of keen sight in a thousand things, big and little, will suggest itself at once. Locomotion, on which so much of modern life depends cannot be safe, rapid, or accurate without good vision. The man who cannot see, cannot walk in security; the man who has poor eyes cannot drive others in wagon, trolley, or train, in safety. our crowded streets and rushing times, sharp eyes and ears, too, are needed to keep us from accidents which means injury and possible death. Slight defects of vision may be the cause of various accidents, at which I have hinted above; thus, to cite a few examples, confusing drugs, chemicals, or poisonous substances with harmless ones through misreading labels or not seeing just what they are; burning face, hair, or hands through getting too near flame, fire or stove in endeavor to see in spite of near-sightedness; mistakes of prescriptions by druggists. of instructions by nurses, of train-orders by engineers, on account of defective sight, and a 3 that looked like an 8. So that, for the life of us, it is well worth while to preserve sight and ears. Now as to what we call the economic or money value meaning of vision: At the beginning of life almost

it becomes evident that good sight is an asset, poor sight a financial handicap. In no occupation is there a premium on not seeing and the higher the trade or profession, the greater the demands on sight, either in conjunction with the training of the hand as in expert manual work, skilled trades, navigation, transportation, manufacture, and so on, or in the requirement of prolonged reading, writing and use of instruments of precision (optical) in the acquisition of a scientific education. The child with weak eyes is at a disadvantage from the start in acquiring the bricks and mortar of modern educa-tional structure, reading. The child whose eyes are healthy and strong, and can stand the strain of school-and home work without headaches, nervousness, strains of all sorts, will, other things being equal, have the best chance for advancing, not only in school, but in life. Later on, we find that even slight defects of sight affect the earning power of the individual, and this in more than one way. First, by increasing the danger of his being injured accidentally in some one of the numerous ways possible under modern conditions of factory life, and, secondly, by making his work and hence the product less rapid, efficient and There are various standards of reliable. vision for various trades, and the earning power of sight, if I may so term it, has been figured very carefully, not only by the doctors, however, but by the insurance adjusters and claim agents as well. Not only the loss of both eyes or of one, but minor affections, are scheduled as to their damage to the individual and their influence on his earning capacity. Aside from the partial or complete loss of earning power, there are numerous other items of economic loss. such as the time and effort of waiting on and helping the blind, or even of supporting them, the money spent for medicines, nursing, physicians, and so on, in the treatment of eye disease or injury which may have been quite preventable, as we shall see. Multiply the loss which you can plainly see is involved in the case of one child, by the

^{*}A lecture delivered, February 25th, 1914, under the auspices of the Social Service Department of Lebanon Hospital, New York.

number which, statistics tell us, is the average throughout the country, multiply this by the years of blindness during which the individual may be not only a dead loss but a financial burden as well on family and indirectly but no less really on the community, and you will realize why prophylaxis, or preventive medical science is one of the most practical with which we can deal. It is strange that the medical side of this wide subject of efficiency was almost the last to appeal to professional or lay-men. Long ago, capital recognized the importance and profit of efficiency in its living machinery. It was followed out into the minutest detail. The saving of a motion of the hand, the quickening of a twist of a finger, meant pennies an hour or dollars a day. And if these things mean something to the employer why should they mean less to us, the So much for the hard, practical, people. side of the value of vision, but there is another wider and higher thing we must not overlook. I can indicate it best by asking the question "How much would you take to be blind?" You could not be bought, could you, even at the exchange of being cared for in idleness for all your days. It is not only to live and to work that we need our eyes and ears, but to see the things and beings we love, whom we need and who need us. We cannot put a value, a price mark, on the sunset or the ocean, the smile of a child or the glance from the eye of a lover, because these things are beyond the reach of the wealthiest,—cannot be bought. We know how much they are worth by what we would be willing to give for them when we have lost them. So that I need not go further into the need for or the justification of conserving vision and hearing. I need only add that as we are dealing with organs and organisms, that is living things which perpetuate themselves with all their defects, rather than with machines which are limited by themselves, we shall have to consider not only the present but the future, not only the one man or woman, but those who are to come after. The fact that many diseases or weaknesses of the eyes, and particularly the preventable ones, are communicable, and others capable of being inherited and so involving a whole chain of descendants, brings this question into the field of what we call eugenics, the relation of the community to a healthy generation to come. Now a healthy generation to come must first of all have healthy mothers and fathers, and our first care is of those about us. It has been said

that in bringing up a child you must begin with the training of its grandfather. This is neither as fanciful nor as impracticable as it might seem, for the children of to-day are to be parents, and grandparents, we hope, and what we can do for their health and strength will be handed on indefinitely, just as their defects and preventable disabilities will persist to weaken and handicap another age of human beings. "The child is father to the man," in matters of health as in so many others.

Methods of Conservation of Sight and Hearing.

First, remember that the general health is of vital importance and bearing. Good nourishment, fresh air, sunshine, exercise, will not only tend to develop eyes and ears as they should be developed, but help the child to throw off, perhaps, contagion which often affects the eyes and ears seriously. Many of the most serious affections of the eye and some which often end in blindness are caused by the entrance into the blood-current and final lodging in the tissues of the eye of the germs of consumption, grippe, pneumonia, and blood-diseases of various kinds. The "catching" diseases or eruptive fevers, such as measles, chicken-pox, whooping cough, of the less serious; scarlet fever, diphtheria, of the more serious, are almost always associated with or followed by inflammations of the eye and ear. Prevention of contagion due to these diseases and to grippe, would wipe out perhaps one quarter of all eye disease in children. It has been found that the greater part of these diseases are caught by breathing, that is, the germs enter by the mouth and nose, and then develop and multiply. This is why snuffles and sore throat so often precede "catching" diseases, and probably rheumatism. Now, any condition of the nose or throat which interferes with free deep breathing, and anything tending to keep up irritation or inflammation in these parts favors the breeding of germs and predisposes to disease. The air, normally, is warmed, moistened and filtered in passing through the nose. When the nose is stuffy the mouth is opened for breathing, and the air stream passes through rapidly and in too large a volume to be treated as before. It is cold, dry, and unfiltered. The germs it contains are deposited on the throat, tonsils and upper breathing passages and easily cause trouble. So normal breathing of clean air is an important preventive, in a roundabout way, of eye and ear disease. There is a more direct path, in regard to ears, however. It has been found that frequent colds "in the head," that is in the nose, even when not followed by contagious disease, and any long standing nose affection which blocks this passage with slime or matter, gradually destroys hearing and produces a slowly progressive and almost incurable So prevention of colds is andeafness. other item in the preservation of sight and Prevention of colds, however, means natural deep breathing; it means the treatment by competent physicians of any condition which interferes with this function. "Shut your mouth and save your life" was the way a well known physician, Catlin, put it, over a half century ago, and there is a good deal of truth in the maxim. The habit of deep breathing, through the nose can be assisted by sports and exercises and The earlier in childhood it is by baths. established, the better for the general health and the resistance of that child. Susceptibility to contagion, repeated attacks of colds, sore-throats, tonsilitis, and the eruptive fevers, always mean abnormal noses and throats requiring special attention. Besides prevention it is well to bear in mind that early treatment of each and every one of these diseases is another important factor in preserving eyes and ears, as the affections of the latter organs generally do not develop until the disease has been active for some time. Then the quarantining, separation or isolation of children with communicable disease is a means of preventing many sore eyes and running ears. This may be obvious and should be a matter of course, but, unfortunately, there are many communities in which this necessary precaution is opposed through superstition, neglected through carelessness or ignorance, or not carried out because it means spending a little time and trouble and perhaps, money.

Local conditions. In regard to the eye, many affections which interfere with sight can be put in two classes, infections and injuries, both accidental and to some extent preventable. Accidents will happen, of course, but less often if we take care than if we take chances and no precautions. Most eye infections come from without; they are brought into contact with the delicate surface of the eye by dirty hands, soiled towels or handkerchiefs, by dust blowing into the eyes from filthy streets, or,—and this not so rarely,—by dirty solutions used as eyedrops or eye-washes. So we speak of air-

borne and of contact infection. The latter is most common. We can guard against air-borne contagion but little, except, perhaps, by washing out the eyes with boiled water or boric acid solution, after they have been exposed to dust or other "foreign bodies." Next to prevention, the best thing is, as in all diseases, early and capable treatment. Contact infection can be prevented to a large degree by guarding against rubbing of the eyes or fingering the lids unless the hands have been carefully washed and scrubbed in hot water and the nails carefully cleaned. This is of special importance where there is an infectious discharge, as from a running nose or ear, or a sore of any kind, recent vaccination, an itchy skin-eruption, pimple, or even slight scalp affection. Then, the danger of borrowing handkerchiefs, or using other people's towels must be borne in mind. Some of the worst eye infections have been spread in this way. If an eye-infection has actually developed, these precautions must be redoubled. Before and after washing or putting drops into a sore eye, the hands must be washed. Any cotton, or cloths used on an infected eye must be thrown into old paper bags and burnt up. Any instrument which is to come into contact with the eye must be sterile or surgically clean, that is, it must have been boiled or heated in cleaning so as to destroy all germs which may have been on it.

At the very threshold of life and light, the eyes are threatened with blindness. An infection not infrequently occurs at birth which passes away in a day or two with prompt treatment, requiring simply the dropping in a drop or two of nitrate of sil-The neglect of this simple ver solution. disinfecting precaution may under certain conditions allow a pus inflammation to develop which readily destroys the transparent surface of the eye and leads to dense scars or to the complete destruction of the eye-ball. The virulence of the "matter" or pus in these infants' eyes is shown by the rapid progress of the disease, and by the loss of many eyes of nurses, parents and physicians from accidental but preventable communication of the infection while treating or caring for infants with pus-eyes. The disease is even more serious and rapid and communicable in adults than in children. The precautions of rigid cleanliness, isolation, sterilizing instruments, destroying used cotton mops and rags, and protection of the nurse's eyes by goggles while tending

the patient, are of vital importance. Slight injuries of the eye are often made serious by infection due to uncleanliness in the treatment, surely a preventable accident. This applies particularly to the attempts to remove cinders from under the lids or from the surface of the eye. Some of the home methods for these conditions are simply dirty. The easiest way to get out a cinder is to open the eye under the water, as by filling the washed palm of the hand and holding it up to the eye, or some similar method. This failing, a freshly laundered handkerchief may be used on the turned lid. Anything more should be left to a nurse or physician.

PREVENTABLE ACCIDENTS AND INJURIES OF THE EYE AND EAR.

We come now to a chapter which is not a pleasant one for physician or lay-man to read. In the home and at play children are exposed to many injuries of the and a warning to them may save from blindness. Little children should be forbid den to play with pointed instruments, as pens and pencils, and larger ones shown how to handle knives or scissors and not to 'play" with them. Children should be taught that matches are not toys. Explosive caps, "toy" pistols, fire-works, gunpowder, are other sources of danger. most rational procedure, I think, is to explain to children why these things are dangerous, and show them how they are to be handled if handled at all. Throwing sand or stones is a favorite pastime which has cost many an eye. Carrying walking-sticks and umbrellas under the arm up stair-ways is another favorite amusement of grown-up children. Bean-shooters, pop-guns, air rifles and putty-blowers, are a source of danger if carelessly used. Children should be warned, again and again, against pointing any arm at a living being. The sports of older children, especially games with bats and balls, are prolific of injuries of the eye, and as these games are a source of health and strength, it would be unwise to forbid them. The players should however be warned of the dangers and the necessity for caution both in looking out for their own protection and in taking care not to harm others. Those who wear eye-glasses should be particularly careful, as a smashed glass may turn a slight accident into a fearful injury. This applies also to the bursting of vichy siphons and beer bottles, and those who handle them should be warned to exercise caution.

Many trades and occupations, even household procedures, are carried on under conditions which are full of danger for the eye. In the home, careless use of hammer and chisel, scalding hot water, lye, acids used as bleaches, aniline pencils, gas-explosions, are among the most common. Almost all mechanical trades are inseparable from injury of the eye with minute chips or specks of metal, emery, stone, or glass. Riveters, knife-grinders, polishers, stone masons and stone-cutters, carpenters, are particularly exposed. In other trades irritating vapors are set free in the air and inflame the eyes and breathing passages. In many factories use is made of substances such as white-lead which not only causes 'painter's colic" but may lead to blindness. Wood alcohol, an impure spirit used not only for legitimate purposes such as varnishing, but to adulterate perfumes and cheap drinks, is a most dangerous poison. and a small amount drank or even breathed in as fumes, say in a small room, may lead to incurable sudden blindness over-night. Inspection and rigid regulation are the measures to be used in dealing with these conditions. Trades which are "dangerous" for the ear are those which are noisy, as boiler-making, rivetting, exposure to explosions, blasting, or unusual air-pressure, as in tunnels, mines or caissons. Among children, the practice of stuffing peas, beads, and other small objects into the nose or ear may lead to serious trouble, especially if overlooked for some time.

If we are able to prevent all infections and injuries, there would still remain a very large and important field, hygiene, the proper use of the eyes and ears, and the correction, by suitable glasses, of any optical conditions which interfere with such use, lower vision, or cause eye-strain. Among optical conditions we mean far-sight (hypermetropia), near-sight (myopia) and astigmatism. The last is no actual disease but, like the others, an optical condition which can be neutralized and corrected by suitable glasses. that is, cylinders. Bear in mind that these defects, especially in the young, are not always made manifest by complaints of poor vision. The child may not know and the teacher may not recognize at once that a child does not see as well as its fellows. Special tests may have to be made of far vision, i. e., reading letters across the room, and of the accommodation of focusing power, i. e., the ability to see very small objects distinctly close to the eyes, as in

reading, sewing, and all such short range work. It is just this kind of work which strains the eyes most and if carried on under unhygienic conditions of defective illumination, position, type and printing, or of eye-structure leads to deterioration of vision and many other troubles.

Parents should realize that eye-strain may be at the bottom of much vague discomfort or actual sickness in children. It may make them inattentive, apparently stupid, peevish, cranky, fidgety, or disobedient. Every child which falls behind in its school work or is "hard to manage," should have its eyes examined and carefully tested by a capable oculist.

We should exclude or relieve eye-strain before jumping to a conclusion of infantile hysteria, nervousness, or "natural cussedness." If children complain of dull headaches, the eyes ought to be examined at once. In fact, all children should have their eyes looked after before going to school, and yearly thereafter, just as the teeth are kept under observation.

Eye-strain may masquerade under a thousand different disguises, as headaches, as St. Vitus' dance, as biliousness, nervous indigestion, periodic vomiting, nervousness, and be shown by red lids, twitching of face and eyes, rubbing the lids, frowning, peering or "squinting," as it is sometime called, that is screwing up the lids. Actual squint, otherwise known as "cast" or cock-eye, a condition in which the two eyes do not look at the same point, is an affection of the muscles which turn the eye-ball to look at a thing, or "fix" as oculists say. Defective sight in one eye is often a cause of this condition and when corrected in time may prevent a deformity which frequently requires an operation for its correction. I have spoken of eye-strain in children because childhood is the time of most rapid change and growth of the eye, but "grownups" too should be on the lookout for eyestrain and insist on a careful examination of the refraction if their eyes are not comfortable or if they are headachy, dizzy, bilious, nervous, or have "indigestion." With properly fitted glasses or with normal eyes, all work should be done under sensible con-This means good light—on the ditions. paper or book, not shining into the eyes from the front. Fairly large type, good ink and good, clean, not highly calendered or "shiny," paper, and finally a position which shall not cramp the reader in any way. Reading on into the dusk or in a dark corner of a room should be absolutely forbidden. Reading in bed is harmless. The light, behind and above the pillow, is in the best possible position. The book should be held up, however, so as to be level with the eyes, otherwise there will be muscle strain from looking down continuously.

To conserve sight, the eyes, presupposing that they are sound, must be used in a rational way and kept in good condition; that is what we mean by hygiene. essentials of ocular hygiene are; good, steady light on the work or reading matter, not in the eyes of the reader, good print, the protection of the eye from foreign bodies in dangerous trades, and the avoidance of the numerous causes of ocular disease mentioned in prevention. Last, but not least, the vision and refraction should be tested regularly and any defect corrected by glasses, especially in children. Schools, work-shops and factories should be illuminated by special systems which have been worked out in detail by illuminating engin-This is a measure of general safety as well as of ocular hygiene. Beauty and utility in books, magazines, signs, posters. and advertisements, is quite compatible with large legible print. Much could be done to avoid injuries to the eye from dust and dirt in streets and in certain factories. This applies particularly to sand and grit carried about by winds from excavations and building operations. Other obvious sources of danger are presented by smoke and flying sparks, irritating vapors and gases in trades or domestic occupations, and finally the poisons which destroy sight, first and foremost, wood alcohol, and in second line. tobacco and strong drink.

The hygiene of hearing and the care of the ears is intimately connected with the care of the nose and throat, and teeth. free nose breathing, development of chest expansion, prevention of common colds and the little less common snuffles. Good general health and freedom from the acute infectious diseases, which, as we have pointed out, are almost without exception contracted by respiratory infection, would cut down deafness more than half. Unnecessary noise is not only a nuisance but a menace to sound ears, to the nerves, and to the voice. This last may seem strange, but it is beyond doubt that much vocal trouble is due to straining the voice, shouting, or screaming at a high pitch in an effort to heard above the make oneself of our unnecessarily noisy streets, roaring subway or elevated trains, shrieking, groaning auto horns, and clatter of ironriveting, din of whistles, motor-car cutouts, and the thousand and one auditory
inflictions of city life. The mental and emotional benefits of quiet are not yet fully appreciated. It would be a consummation
devoutly to be wished for if we could have
Maxim silencers for typewriters, boiler
factories, and other noise producing agencies.

SOME EYE AND EAR DON'TS.

Don't touch an eye with an unwashed hand. Don't wipe your eyes with any but a clean handkerchief. Don't rub your eyes with your finger at all. If your eyes itch. wash them with hot water and have them looked after. If you get a cinder in your eye, try to keep it open for a minute or two. or open it under water. If that doesn't help get some one to turn the upper lid and lift the cinder off gently with the end of a freshly laundered handkerchief, or, if alone slide the upper lid over the lower. anything further get a physician. Don't let children play with fire, matches, knives or scissors. Use common sense and some care in opening cans, pulling nails or handling tools generally. Don't run about carrying pointed instruments. Don't get too near long hatpins or have them sticking out yourself. Don't think a child will "out-grow" a squint. Have it looked after. Don't consider a child's headache a trivial matter. If they come often, have the eyes examined. Don't read in the dark, or with the light in your eyes, or badly printed books, or, if you can help it, on cars. Don't neglect an infant with "matter" in its eyes. Have a doctor see it at once. Don't be ashamed to wear glasses if they are going to help you. Don't be afraid that they will give you the habit. You may need a good habit. Don't look into the sun to show how strong your

eyes are. It has been done before by many fools and proves nothing but that you are willing to ruin your eyes. Don't try to get along without glasses when you know you need them. Don't lend or borrow spectacles. Don't go to a jewelry shop to have your eyes examined.

Don't give home remedies for headache

to any child.

Don't allow a child to put beans, peas, beads, or other bodies in its ear or nose. Don't put anything into the ear but the point of your elbow.

Don't try to get anything out of the ear

but hearing.

If the ear aches, put a hot-water bag over it or a moist hot gauze compress. Don't put laudanum, hot oil, or other stuff into the ear. If the hot-water bag does not relieve, a little hot water and glycerine can be dropped into the ear. This can easily be washed out again by the doctor. Don't neglect an earache in a child. It may mean only a sore throat. It may also mean serious danger for ear, brain, and life. Have the doctor decide. Don't forget that repeated attacks of earache, however mild, mean that there is something wrong with the nose and throat requiring attention. The same thing applies to repeated colds. Don't breathe through the mouth, but through the nose. Don't let "stuff" accumulate in the back of the nose and block the breathing passages. Keep the nose clear by blowing as often as necessary. If crusts form in the nose drop or spray into the nose a little bland oil or liquid vaseline. Don't be afraid of cold air. "Colds" don't come from cold but from exposure to draughts when overheated, lack of ventilation, muddy dirty streets, improper clothing and sudden changes of warm and cold. Don't pull or box the ears under any conditions. If you must use corporal punishment, nature has provided a better place to apply it.

MASCULINE PRIDE.

A TALE is going about concerning a little boy who was on a visit and found himself without a night garment. His nurse managed to borrow a little girl's night-dress. But the stalwart little male resented the idea of putting it on:—

"I won't wear a girl's nightie. I'd rather sleep raw!"

A thousand people are engaged in lopping off the branches of evil to one engaged in axing at its root.

Policeman (to cab driver gazing at horse's tail)—Didn't you ever see a horse's tail before?

Cab Driver—No, I always saw a horse's tail behind.—The Carteret.



INFLUENCE OF THE IMAGINATION ON THE BODY.

BY C. W. SUPER,

EVERY one who has given the matter any thought knows that the mind exercises a potent influence upon the body. been a matter of common observation both by philosophers and physicians from the time of Hippocrates and Socrates to our own day. Every medical practitioner knows that the patient loses hope; if he "gives up" the chances for his recovery are much diminished. On the other hand, the determination to get well is almost as powerful as medicine. Hence arises the problem whether the mind rules the body, or viceversa. That the living body can exist and function as an organism after the mind is completely gone is a well established fact. Whether the mind or soul can exist apart from the body, or rather after the body in which it was a tenant has disintegrated, is a problem in the solution of which, some of the brightest and most scientific minds of our day are engaged. It has, however, not attracted the attention of physicians so much as of psychologists and physicists as it is not really a medical problem. the mind can be trained to govern the body Moral conduct is based nobody doubts. on this assumption. There can be no moral or legal responsibility, if the intellect is not supreme and if there is no such thing as rational insight.

Two somewhat remarkable cases that demonstrated the influence of the mind upon the body were brought to my attention many years ago. When I was a small boy on a farm in Pennsylvania, a vendor of patent medicines, drugs, essences and other like commodities used visit our neighborhood every few months. One day as he was driving along the road he began to feel bad and recollecting that he had near him a drug that was guaranteed to meet such cases reached down among his bottles, took out one that he supposed to be a tonic and without looking at the label swallowed a little of its contents. A few minutes later he had occasion to visit a farm house that stood a furlong from the road. After tying his horse he started to walk up the path toward the house when it suddenly occurred to him that he had taken poison by mistake. He began to feel so much worse at once that he could hardly walk. But not wishing to turn back until he had performed his errand he made his way as best he could to the house, although when he reached it he was so weak that he could scarcely drag himself along. However, when he got back to his wagon and had made sure that he was not mistaken in the medicine he had swallowed he began to improve at once. Some months later the man told my mother that he believed he would have died if he had remained an hour or more under the delusion that he had taken poison.

The following anecdote I heard my father tell more than once. A farmer of his acquaintance had a wife and three children. From some cause the woman became : hypocondriac and imagined that she would speedily die. She took to her bed and al! the efforts of the neighborhood physicia to convince her that she was mistaken proved unavailing. Time after time she would send for her husband when he was at work in the fields for the purpose of bidding him a last farewell. The farmer finally decided to refer the case to anothe physician. This man at once discovere' "the lay of the land." He told the unfortunate husbandman that he had been too patient with his patient, and that if he could make her angry or arouse her jealousy she would get up at once, for medicine would do her no good. Now it happened that there was an old maid living in the neighborhood named Jane Kitchin to whom the wife had a mortal antipathy. time she sent for her husband he came to her bedside and said: "Well, Mama, if you are going to die I wish you would hurry up. You have been talking about it so long that I have made preparations for it.

you're gone I'm going to marry Jane Kitchin and affairs in my house will go on all right." The patient forthwith leaped out of bed declaring that Jane Kitchin should never rule over her children, and that she would take charge of her own affairs. And she did. One of Moliere's best comedies and his last, "The Imaginary Invalid" was written to ridicule persons who believe they are sick when they are not, but incidentally also the medical profession of his day. This comedy was very popular and was played sixty-two times in Paris during the first two years after its appearance. The burlesque reception of the physician in the play seems to have been taken from real life. A few years after Molière's death John Locke was present at the conferring of the degree of doctor at the university of Montpelier. The physicians in the procession were clad in red, wore black caps on the heads and were followed by ten violin players. The president of the university made a speech against the recently broached theory of the circulation of the blood after which a red cap was placed upon the head of the newly made doctor, a ring on his finger and a gold chain about his loins. No wonder he thought he was a great man. Yet his greatness consisted mainly in knowing very many "things that ain't so" as Josh Billings says. In the

year 1800, that is more than a century after this event medical science can hardly be said to have existed. Human anatomy was better understood than in the time of Galen. but therapeutics had made little progress. It is a question whether real or imaginary disorders have caused the most suffering in the world. We need only to reflect upon the witchcraft delusion to realize that the question is not easily answered. There are few more gruesome chapters in modern history than those dealing with witchcraft. Almost from the first, voices were raised against the cruel delusion by physicians and others, but popular ignorance was too crass to listen to the voice of reason when it was lifted up against prepossession. the everlasting credit of Martin Luther that he raised his voice against it. But most his followers were less wise. If science had never done anything more than dispel this. frightful delusion it would have contributed enormously to the happiness of the human race. It is worth a passing remark that the very recent doctrine of telepathy bears some resemblance to witchcraft. If thought can be transferred through space from one person to another, why may not persons disposed to harm others manifest their malice practically in this way?

Athens, Ohio.

SUGGESTION.

In one of our great hospitals here it has been the custom for a long time to use for treatment by suggestion a tuning fork, which is known at that hospital as a mag-It is not a magnet; it is merely an ordinary, plain, rather large tuning fork. But people have, as you know, a very curious superstition about the action of magnets, and believing this tuning fork to be a magnet, they attribute occult and wonderful powers to it. When placed upon a supposedly paralyzed limb or on the throat of a person who thinks he cannot speak, it has wonderful powers just because it is supposed to be a magnet when, in fact, it is a tuning fork. I remonstrated once with the gentleman who uses this tuning fork because, so far as I could see, it was a lie, like other forms of quackery; but

he said, "Why, no, it does a great deal of good; it cures the patients." I replied that I had no doubt of that. So does skunk oil: so does the magic handkerchief which Francis Truth has touched; so does the magic ring, the electric belt and the porous plaster. In another great hospital in this city electricity is used in the same way Electricity has medical action, of course, in some cases, but it is used also in a great number of cases where it is not supposed to have any medical action because has so strong a psychical action. When one sees a brass instrument that looks like a tendrac approaching one's body, and feels long cracking sparks shoot out of its prongs against his body, it naturally makes a very strong impression upon one's. mind.—Dr. Richard Cabot.

THE SUBCONSCIOUS MENTALITY.

H. Addington Bruce writes thus in The Semi-Monthly Magazine:

"When a scientific friend once asked the late Professor James what he hoped to accomplish by his persistent delving into occult phenomena, his instant reply was: "To find balm for men's souls." And undoubtedly this answer summed up with incisive vividness the chief motive that, from the days of the early eighties when organized psychical research came into being, has led scientists of such pre-eminent standing as Professor James, Sir Oliver Lodge, Sir William Crookes and Cesare Lombroso, to disregard the sneering criticisms of their colleagues and to adventure into the bewildering realm of the weird and the uncanny. One and all, they hoped to gain scientifically acceptable evidence validating the traditional belief of mankind in a life beyond the grave.

"But there was another motive prompting them to undertake their ridicule-provoking This was their realization that the progress of knowledge has always depended on the degree of attention paid to the 'unclassified residua' of the facts of experience. and that the obstinate refusal of the scientific world in general to pay any attention whatever to unclassified residua like hauntings, apparitions, premonitions and mediumistic communications, quite possibly involved serious gaps in a full understanding of the nature of man here on earth. 'Is science a completed book?' these open-minded thinkers asked. 'Do we know everything that is to be known concerning ourselves and the universe in which we live? Or is it not our duty to seek to win a larger knowledge by whatsoever means are available to us, and no matter how laborious or distasteful the work of investigation may be?' In this belief, and from this point of view. William James and his fellow psychical researchers attacked the mysteries of spiritism.

"The result has been to justify abundantly their courage and their confidence. If the actuality of the soul's survival still baffles scientific demonstration, the effort to demonstrate it has most assuredly enriched our knowledge of the human mind, and has brought to light facts not only of an astonishing character but of immense significance to the interests and needs of everyday life. So true is this that to-day, especially in the fields of medicine and education, practical application is being made of novel principles and methods, the discovery of which has been directly or indirectly due to psychical research.

"Take the now well-established psychological law of 'subconscious mentation'—the law which affirms that all of us constantly perceive and remember far more than we appreciate, and that these subconscious perceptions and memories often exercise a controlling influence over our conscious thoughts and behaviour. Out of the discovery of this vital truth has resulted on the one hand a complete explanation on a naturalistic basis of many phenomena formerly reputed to be supernatural, and on the other hand recognition of the tremendous rôle played by subconscious ideas in affecting one's character and career, and even at times in affecting bodily health. There cannot be the slightest question that psychical research first put science in earnest on the trail of the subconscious, and that to it must be credited much of the strongest evidence substantiating this hitherto unsuspected phase of the mental life of man."

As to hypnotism, automatic writing, crystal gazing, clairvoyance and the like:

Gurney made the important discovery that persons on being brought back to consciousness from hypnotism have no conscious recollection of what transpired during that state, except (observes Bruce) as brought out by some such means as "automatic writing" or gazing into a crystal or some other bright object, as a glass of water. For instance, one dehypnotized would be given pencil and papers; a screen being then placed between his face and the

paper so that he could not see what he was writing, he would write down statements made to him under hypnosis, without being conscious of the words he was forming. And a dehypnotized person being lead to gaze into a crystal would see in it hallucinations representing the ideas conveyed to him during hypnosis, without comprehending that these pictures represented information given him in that state.

Thus the phenomena of automatic writing and crystal gazing have been proved not to be supernatural but scientific; they simply prove anew that the supernatural is as yet unexplained. And those "sensitives" who write trance messages, see visions, dream dreams and do clairvoyant stunts generally are simply drawing on forgotten reminiscences. Nor can they prophesy the future except as they are able to draw shrewd inferences out of their past experiences. Now, as ever, you really cannot successfully prophesy unless you know.

S. Lowes Dickinson, a psychic researcher, has provided a most clarifying instance: A trance medium or "sensitive" who was not at all an imposter, considered that she had come in touch with the spirit of one Blanche Poynings, who described herself as having been a great friend of the Countess of Salisbury in the reign of Richard Second. The spirit in Blanche seemed to have talked to the sensitive at several seances attended by Mr. Dickinson about the Countess and her husband, the Earl of Salisbury. Countess had been much married—three times her former husbands having been one Aubrey and Sir Alan de Bruxhall. Blanche gave the names of the Countess's various children, described the Earl as a cultivated, talented gentleman, with some curious episodes in his career; gave her own maiden name—de Manbray, the name of Sir John Worth, whom she married after Poyning's death, told how she had been expelled from court by Arnold, one of the Lords Appellant, with other information that added verisimilitude to the narrative.

Here was a case of "spirit communication" that most people would have concluded would down any skeptic. Besides, Mr. Dickinson, my rumaging diligently through old chronicles, charters and passages found almost all of Blanche's statements to lie on fact. And the sensitive assured him she had never studied the English history of that time and knew nothing at all about it. And anyway some of the facts given were such as not even a deep student of history would have happened on. Blanche herself was an unimportant personage, just a lady in attendance on the queen.

However, whilst taking tea an afternoon with the sensitive and her aunt, Mr. Dickinson learned that there was a plambetle in the house with which she could do automatic writing. So, it being brought out, he put questions to it bearing on the Blanche Poynings messages and elicited that corroboration of these messages could be found in a book by Emily Holt entitled "Countess Maud." Then the sensitive recalled that she had once read a novel by that title, though neither she nor her aunt could remember anything about its plot, nor the period with which it dealt, nor even whether it contained any mention of Blanche Poynings.

A few days after Mr. Dickinson managed to procure a copy of the book and found in it practically ever person and every fact that had been given by the alleged spirit of Blanche Poynings. So, on her own perfectly frank admission the "sensitive" had elaborated the communications out of her subconscious retention of a book she had at 12 years of age heard her aunt read, had herself gleamed through and had so completely forgotten that she could recall nothing about it during her conscious hours.

THE POWER OF WORDS.

Words, when well chosen, have so great a force in them, that a description often gives us more lively ideas than the sight of the things themselves. The reader finds a scene drawn in stronger colors, and painted more to the life in his imagination, by the help of words, than by the actual survey of the scene which they describe. In this case

the poet seems to get the better of nature. He takes indeed the landscape after her, but gives it more vigorous touches, heightens its beauty, and so enlivens the whole piece, that the images which flow from the objects themselves, appear weak or faint in comparison with those that come from the expressions.—Joseph Addison.

HOMOGRADE.

By F. E. ASPINWALL, M. D., La Grange, Ky.

This is the latest thought in thermometers. In the Homograde the normal human animal heat at or near the surface of the body where sensation mostly exists is the unit of value and every degree in the scale is equivalent to the hundredth part of that unit. Thus every degree and every figure in the scale has an instantly apparent and definite value, and all temperatures are at once understood by comparison with the accepted normal animal heat.

The Homograde scale may be briefly described as follows: Beginning with 0 at the freezing point, 270 is placed at the boiling point of water. This brings 100 at the accepted normal for blood heat, viz., 98.6° F., or more exactly 98%° F.

In the finished thermometer the figures from 0 upward are placed to the left of the tube; those below 0 are placed to the right of the tube, thus showing instantly when the minus sign is to be used in recording temperatures and lessening the liability to error. In the clinical thermometer the figures from 100 upward are placed on the left side of the tube, and from 100 downward on the right side of the tube, the 100 being on both sides. On the back of the tube is the wording: "Homograde. Normal." This makes a beautiful thermometer with strikingly fitting figures which show instantly the percentage of departure from the normal. Thus 100° H. represents the normal animal heat, an even 100%, when, as far as temperature is concerned, there should be perfect comfort. 105° H. would show a 5% increase above normal, a moderate fever. 110° H. would mean 10% above normal heat, a vital disturbance of about double the force and probably danger indicated by 105° H. 95° H. would be 5% below normal, probably only a temporary loss of surface heat. Now these figures are so strikingly fitting and give so clear an understanding of animal heat conditions that they are not likely to be forgotten by either physician, nurse or stu-

It is not alone in the clinical section of the score that the Homograde figures fit. They fit everywhere, and at all important points "round numbers" prevail. Thus 0° H. represents the point at which all animal life has ceased to be manifest. Changes of temperature below that point do not count at all in animal life. Hence the appropriateness of expressing animal heat in degress above freezing. And with 100 representing the human animal heat the Homograde thermometer harmonizes with and aids human nature in its tendency to compare and measure all other temperatures with its own. Even the boiling point of water is better understood by this comparison, it being shown to be, according to altitude, 2.5 to 2.7 times higher above freezing than the animal heat. The fitness of the Homograde figures is further shown in the ideal way in which the seasonal temperatures divide as follows: Winter 0° to -50°, extreme be-Spring and Fall above 0° to low —50°. -50°. Summer above 50° to 100°, extremes above 100°. 50° H. beautifully represents one-half or 50% of the animal heat, an atmospheric temperature that is most agreeable for either work or play in moderate clothing.

To still further illustrate the features referred to I suggest for both temperatures the following scale, the figures representing degrees Homograde: 110 hot, 100 very warm, 90 warm, 80 tepid, 70 cool, 60 very cool, 50 cold, 40 very cold, 30 "frigid." All temperatures below 50° H. are very chilling.

The Homograde figures are not thus fitting accidentally. They are so because the scale is perfectly adapted to themometric use

Often users of the Fahrenheit thermometer spend time and energy calculating the number of degrees above or below freezing, which they instinctively recognize as the proper point to reckon from, and this to little purpose, since after that is accomplished there is nothing in the scale to indicate the value of a degree or any number of degrees. Hence is seen the need of a thermometer having a scale starting at freezing and so graded that every figure has a clearly apparent and definite value. For example, what is the value of 50° F.? Or what is the value of one degree Fahrenheit? The writer has yet to meet the first person who could give a satisfactory answer to either question. By changing 50° F. to its equivalent 27° H. it is instantly shown to be 27% of the animal heat. The inappropriateness of the "50" is self-evident.

Again, to the people generally, and especially to physicians and nurses, 37° C. normal for blood heat is not likely to be entirely satisfactory. The figure does not seem to fit. Besides, with that scale how would one arrive at the relative value or percentage of any variation from the normal? This latter is important, since in no other way can we reach so clear an understanding of temperature variations. Nor in studying ordinary temperatures is the boiling point 100° C. useful for comparison, since that point is inconceivable, far beyond the recognition of the sense of feeling. This brings us to the human animal heat as the only true unit of temperature value. And 100 at this point gives every degree in the Homograde scale the value of 1% of that unit.

The only redeeming feature of the Fahrenheit thermometer is its short degrees. The Centigrade degrees are exceeding long, necessitating much use of fractions. It is, however, much in favor in various scientific fields, its long degrees being divided into fractions to suit. But the masses of the people, including most physicians and nurses, would greatly prefer the Homograde thermometer with its short degrees and well fitting figures.

The Homograde scale alone without the instrument is useful for determining the value of temperatures expressed in terms of other thermometers. All who are interested

teresting and instructive to convert Fahrenheit or Centigrade figures into their Homograde equivalents. Throughout the Homograde scale there are exactly three degrees to every two degrees in the Fahrenheit scale. Hence to convert Fahrenheit figures to Homograde find the exact number Fahrenheit degrees above or below freezing and increase that number one-half. Thus: 50° F.=50—32=18+9= 27° H. To change Centigrade figures to Homograde multiply the Centigrade figures by 2.7. Thus 50° C.= $50\times2.7=135^{\circ}$ H. Which latter figures signifies 135% of the animal heat. By these simple processes we are enabled, instantly they are accomplished, to know the real value of the temperatures we are studying. A knowledge of the Homograde scale, therefore, should be possessed by all students of temperature and especially physicians and nurses. While the scale alone will be found interesting and instructive, the thermometer would be found exceedingly satisfactory. In fact once used no other will fully satisfy.

in temperature studies will find it both in-

During the past quarter of a century the writer has given much thought to this subject, to which before perfecting the scale several months were devoted exclusively, not for pecuniary gain, but to be able to offer to the world a short degree thermometer to take the place of the unscientific and unsatisfactory Fahrenheit with its misfitting figures. And he has succeeded far beyond his original aims and expectations, for many good features and advantages of the Homograde thermometer became apparent and were first thought of after perfecting the scale.

Yes, the Homograde thermometer scale is now perfect. No change for the better can be made. Theoretically the instrument is as fixed and precise as any other, and nothing whatever stands in the way of making it actually so. It is ready for manufacture and introduction. It is my gift to the world if the world will accept it. The extraordinary satisfaction that it is calculated to give should make sure its acceptance.

This is from Australia: "Gentlemen, a member of this House has taken advantage of my absence to tweak my nose behind my back. I hope that the next time he abuses me behind my back like a coward he will do it to my face like a man, and not go skulking into the thicket to assail a gentleman who isn't present to defend himself."

An eloquent Irish candidate, speaking of a certain eminent statesman, said:

"His smooth tongue is that of a serpent which lures but to destroy, and which holds out sugar plums in one hand, while in the other holds an unsheathed dagger behind its back."

RURAL SANITATION.

BACK TO THE LAND.

THE slogan Back to the Land, whence must come almost all of human nourishment and of human wealth cannot be too often raised; not nowadays, when the sons of farmers and their daughters too, are so insistently leaving the blessed green fields to become merged oftentimes so miserably and with so much disappointment in the maddening crowds of cities. We note then, withpeculiar gratification that the Long Island Agricultural School is building on farm, pasturage and wood land near Farmingdale, L. I., and it is hoped this institution will play an important part in shaping country life, in reducing the high cost of living and in influencing beneficially and generally the economic situation in and near the metropolis. In this school young men from thirteen up will be trained to be not only scientific but practical farmers, a love of the soil will be inculcated in them; and it will try also to make girls and young women practical housewives, able to cook, to sew, to take care of homes and, most of all, to economize. The young men will do actual farm work; the young women will live in cottages, in which they will do all the domestic work. Albert A. Johnson, Esq., at present the Director of the Milwaukee County School of Agriculture, at Wauwatosa, Wis., is to control the destinies of the Long Island School.

We have mentioned thus far only the youth of the land. But all ages desiring instruction will be welcomed under Mr. Johnson's directorship. He has had students anywhere up to 78 years of age. In his Milwaukee County School there are now, for example, three generations of one There are more than seventy-five mature women, mostly married, and with families, all taking up practical work. The poor and the rich are alike there to learn; the wife of the poor man, perhaps, if for only one thing, to be able to take a cheaper cut of meat and prepare it so that it will be as highly esteemed as a more expensive part of the beef.

In the Farmingdale School the successful business man who is retiring may come out to study about poultry, say; and he can have that information alone, if he wants no other. Then there are thousands of abandoned farms; many of these have been bought by city men of means as "country places." These city men can learn a lot how to develop their country places under Mr. Johnson's directorship.

Mr. Johnson believes that it is not possible to teach farming without a farm; and there is at Farmingdale "a laboratory" of almost 300 acres in which the students will do practically all the work. The buildings with many details we cannot here describe, save that there will be an administration building; an educational group (the agriculture, agromony, science and domestic science buildings, gymnasium, greenhouse, library and store); the farm group (machinery, farm mechanics, poultry and stock judging buildings, horse, cow and storage barns and power house); and the residences of the Director and the professors. And there is to be a band stand. To the left of the educational group will be the boy's dormitories; to the right the girls' cottages-some forty of the latter and of the kind that would probably be rented to the average dweller in the suburbs and costing about \$4,000 apiece.

The girls will get their first training in the domestic science building, but much of it in their third and fourth years will be in the cottages. They will be marked each day on the way they keep house. The store will be located near their quarters, and there they will get their training in buying. Then they will have to prepare their food. After a little time, the senior girl in each house will be responsible for it, and during the course each girl will have had one year's experience in actual charge of a house. For each cottage there will be a flower and vegetable garden which the girls will be pected to take care of. Each house will ,in short, be a practical home.

In this school there will be no tuition for residents of New York State, for it is a State enterprise. Living expenses will be just what they cost; in Milwaukee the charge for board is \$18 per month. After the first year the school will produce all its own vegetables and sell them to its own refectory. No one will be sent to this school; all will come of their own free will. And the sessions will continue through twelve months of the year; and it is expected the attendance will be greatest when other schools have their vacations.

Regarding extension work: Instructors will go about among farmers. If a farmer has difficulty with his herd of cattle, the School will send its dairy expert to confer with him and there will be no charge for the service. If the potato grower or the chicken raiser has any trouble the school's experts will go and help solve the problem. A one week school will also be conducted in rural communities; lectures will be given on various subjects; and much will the be done by correspondence.

THE COUNTRY DOCTOR.

Day in, day out, night out, night,
Where snow is thick and fees are thin,
He hustles with his cherry grin
To fight with ills.
The drives are long, the nights are cold,
He suffers hardships left untold
To call upon some mother old
Across the hills.

Little he says about his pay;
Often he gives his skill away,
And tho's he's getting bent and gray
He has no wealth.
His life has been an endless trial,
His motto has been self-denial;
Freely he gives from every vial
For some one's health.

The gallant soldier goes away
While fife and drum and bugle play
Bravely to conquer or to slay—

That is his part.
The country doctor rides alone
Through rugged roads, o'er stick and stone,
To heal men, not to make them moan;

God bless his heart!
—William F. Kirk in New York Evening
Journal.

"Are you the same man who ate my mince pie last week" inquired the matron.
"No, mum," murnfully responded the tramp; "th' doctor say I'll never be th' same man again!"

Lors of men know a good thing the minute the other fellow sees it first.

THE veil which hides the future from view is a fabric woven by the hand of mercy.

LAYERING IN GARDENS.

GARDENERS have learned to employ four different kinds of layering, all amounting to the same thing, of course, yet varying a little bit. All depend upon the same two principles, that is, that roots like darkness and that an interrupted flow of sap in a branch tends to make that branch put forth new roots to restore this flow to its normal volume and thus restore to the branch its normal amount of nourishment. When a plant is growing above ground, buds and branches rise out of the stem at certain definite places along its length. These places are called "nodes," and the spaces between them are called the "joints" of the stem. When a stem is covered with earth, it is at these nodes that roots are more likely to arise than elsewhere along the stem.—St. Nicholas.

THEY CERTAINLY SUFFERED.

LADY: "I am collecting for the suffering poor."

Man: "But are you sure they really suffer?"

Lady: "Oh, yes, indeed. I go to their houses and talk to them for hours at a time."

VISITOR—Nothing stirring on the campus, 1 see. Vacation is on?

Student—Not much. The crew has gone to Billowpoint, the baseball team is on the Southern trip, the track squad is trimming everything in the West, and 90 per cent. of our faculty is attending scientific conventions abroad—the highest percentage of any American university."—Puck.

Love is like a Spanish hotel; one finds in it what one brings with one.

MILK.

PROF. MILTON J. ROSENAU, of the Harvard Medical School, in his admirable work The Milk Question (Houghton, Mifflin Company) corsiders that the right kind of natural milk, obtained from clean and healthy cows, is better than questionable milk made relatively innocuous by pasteurizing. But as only about one per cent. of the cow's milk consumed is "guaranteed milk" general pasteurization is most advisable.

"While milk is the most innocent-looking, it may occasionally be the most dangerous of foods. When all indictments are brought together we find that milk is an enormous criminal. The conditions on the dairy farm are oftener much worse than those at the slaughter house, and the dangers are much greater. One of the greatest tragedies for the sanitarian is to see disease and death follow the trail of infected milk into households that are otherwise in prime sanitary Infected milk is an extravacondition. gance that even the millionaire cannot afford; safe milk at a fair price is one of the cheapest forms of insurance."

In one little town recently there was an epidemic of septic sore throat, which caused sixteen deaths, and the illness of upwards of 400 residents. The whole thing was attributed to infected milk.

In the past five years, Dr. Rosenau points out, Boston alone has had 4,095 cases of disease in epidemic proportions which have been traceable to milk. He enumerates among the diseases known to be conveyed by milk tuberculosis, typhoid fever, scarlet fever, diphtheria, sore throat, foot-and-mouth diseases, malta fever, milk sickness, and occasionally others. The list does not take into consideration the dysenteries and gastro-intestinal diseases of babies.

Rosenau does not maintain that "every portion of milk is a potion of poison." He emphasizes the danger and indicates the remedy. He recognizes the fact that milk is an essential diet for children and a very important article of diet for adults.

Pure, fresh milk, he says, is the ideal towards which the public should strive, but until milk is absolutely safe, he argues that our only protection is through pasteurization. This remedy, together with an efficient system of inspection, is the true method of solving the milk problem. The great stumbling-block in the way of reform, he says is the dis-inclination of the consumer to pay a fair price for a fair article.

As to septic sore throat: "A disease variously known as 'septic sore throat,' "streptococcus,' 'tonsilitis,' 'agina,' 'sore throat,' etc., is sometimes conveyed by milk. Outbreaks of sore throat due to infected milk have not been recognized in this country until recently. In May, 1911, an outbreak involving several thousand persons occurred in Boston. Since then, similar outbreaks have occurred in other places throughout the country. The disease is evidently spreading. In March, 1908, a similar outbreak occurred in Christiana, Norway.

"'Septic sore throat,' due to infected milk, is well known in Great Britain. Swinbank and Newmann (1903) even go so far as to say, 'It is safe to assume that a year never goes by in which there are no outbreaks of sore throat or tonsilitis due to milk or cream.' Outbreaks belonging to the tonsilitis or quinsy type (septic sore throat), more or less paralleling the Massachusetts epidemic, were reported at Aberdeen and at Rugby School in 1881, at Dover in 1884, at Edinburgh in 1888, at Rothesay in 1890, at Hackney in 1900, at Lincoln and Bedford in 1902, at Woking in 1903, at Glasgow and Paisley in 1904, and at Colchester in 1905. The evidence that the disease was spread by milk is quite convincing in almost all these cases, and in many of them the character of the disease, called by English sanitarians 'septic sore throat,' was exactly as noted in our country over the past year.'

Professor Rosenau has given a somewhat detailed analysis of the extensive and serious outbreak of "tonsilitis" which occurred in Boston, Brookline, and Cambridge in May, 1911. There were in all more than 2,000 cases, with about forty-eight deaths.

"This was not only the most widespread and serious, but the first epidemic of this kind traced to milk in this country. It corresponds in all essential particulars to the outbreaks of septic sore throat which have frequently been reported as occurring in England.

"Two forms of sore throat occurred at the time. The clinical and epidemiological features of these two forms of sore throat gave the picture of two separate and distinct diseases; the one ordinarily diagnosed 'tonsilitis' was benign, directly contagious, and presented no unusual features from the usual sore throat more or less prevalent in almost all large communities; the other disease, which we will call 'septic sore throat,' was malignant, not readily communicable from person to person, and presented special clinical features.

"The unusual clinical features of this epidemic disease were its extraordinary virulence, the comparative immunity of children, the high mortality among the aged and infirm."

According to Professor Rosenau, the epidemic of 1911 was due to the distribution of milk. The outbreak was preceded by a similar outbreak of the disease in a section centred about Marlboro a month or six weeks before. Milk was received from dairy farms located in the section where the disease prevailed, and, although no record was obtained of any well-defined cases of tonsilitis in direct contact with the milk, cases were known to have occurred at the proper time in a family of one of the farms from which a portion of the supply was drawn.

"It is presumed then that the actual infection got into the milk from a bacillus carrier or a mild or missed case. A careful veterinary examination failed to disclose any disease of any of the cows furnishing the milk in question sufficient to account for the infection.

The investigation which followed the epidemic of 1911 indicated that the disease jumped Boston by express, and that the outbreak was rather strictly limited to the distribution of the milk. Approximately 800 cases were found in the Back Bay district, more than 1,000 in Cambridge, and at least 265 in Brookline. The disease began about May 8, reached a maximum May 14, and suddenly ceased May 19 to 22. Twentytwo per cent, of the households affected had three cases or more. The distribution of the epidemic, Professor Rosenau says, exactly coincided with that of one of the two main supplies of a distributing milk con-

On the general subject of infected milk.

Professor Rosenau says: "By infected milk we mean milk containing the virus of one of the infectious diseases. When infected milk is consumed raw, it is apt to become infective milk. Some of the diseases transmitted or supposed to be transmitted, through milk, come from the lower animals; some from man. The more serious infections, however, come from human origin. Man contracts most of the diseases to which he is heir from his fellowmen. Cows do not have typhoid fever, scarlet fever or diphtheria, so that when milk contains the viruses of these diseases the infection usually gets into the milk, either directly or indirectly, from human sources.

"When all the diseases due to impure milk are counted up the indictment is a strong one. While pointing out the dangers, we must ever be mindful of the fact that our object is not to discourage the use of milk—only to discourage the production and use of impure milk. We want to encourage the use of good milk as one of the best and cheapest foods on the market. Milk-borne epidemics vary greatly in prevalence and severity. Only one or two persons may be involved, or the epidemic may include several thousand."

The following table has been compiled by Professor Rosenau to show the results of recent milk-borne epidemics in Greater Boston:

	Cases.
1907—Diphtheria	72
1908—Scarlet fever	717
1909—Typhoid fever $\dots = \dots$	400
1910—Scarlet fever	842
1911—"Tonsilitis"	
	. —
Total	1.095

"Other cities have also been sufferers, but milk-borne outbreaks are not always reported as such. It is, therefore, probable that more cases of sickness are due to infected milk than appear in the official returns. Further, it is evident to students of the subject that many a milk-borne outbreak escapes recognition. Small outbreaks of two or three cases in villages and towns are often passed over as trivial occurrences. However, two cases of typhoid in Podunk. with a population of 1,000 persons, is equivalent to 2,000 cases in a city with a population of a million. Not infrequently small villages may have five, seven or eight cases of sickness caused by infected milk. Proportionately this would be an empidemic of untold magnitude in a metropolitan city.'

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

LEISURE HOUR WAS FOUNDED IN THE BELIEF THAT THE PHYSICIAN IS BUT HUMAN; THAT HE LOVES THE BEAUTIFUL IN THOUGHT AND SENTIMENT AS EXPRESSED IN LITERATURE, AND THAT HE IS AT TIMES SURFEITED WITH TECHNICAL MATTER. SHORT, CRISP CONTRIBUTIONS ON ANY OF THE SUBJECTS NAMED IN THE SUB-HEADING ARE INVITED TO THIS DEPARTMENT.

COLD WATER COFFEE INFUSION.

THE three important ingredients of coffee are caffeine, tannin and essential oils. Caffeine, the active principle of coffee, exists as a latent element in the bean; it is a white powder, with a bitter taste and an acid reaction. At 77 degrees F. it is soluble in one-ninth the extent of its solution in hot water (175 degrees to 212 degrees F.); its solubility is increased in water containing cerium, and potassium and sodium salts (the latter being the hard water found in springs and wells).

Caffeine alone, when given as a medicine, often results in headaches and sometimes in mild derangements of hearing and eyesight—noises in the ear and flashes of light. In the form of caffeine citrate it is used to relieve headaches, though in some susceptible people such headaches are increased. The absorption of caffeine from coffee into the system is followed by increased mental action, oftentimes exhilaration so marked that sleep is interfered with; and if taken to excess, as in the case of any stimulant, the period of depression which a great many of our fellow citizens experience supervenes. Caffeine may excite the muscles, producing tremors and irregular muscular action, and may interfere with equable circulation throughout the whole body.

Tannin, or tannic acid, is only slightly soluble in cold water, but very soluble in boiling water; the resulting solution is acid, for blue litmus paper will turn pink in it. Tannin is fairly well distributed in the vegetable kingdom; it is found both in coffee and in tea; ink results when it is added to iron solutions—and that is just what many a housewife drinks when she keeps her iron

teapot standing for any length of time. Tannin when swallowed is astringent to the mouth, throat and gullet, and it gives a disagreeable, oppressed sensation to the stomach. Pure it is a yellow powder. It is used in medicine as an astringent-to relieve hemorrhages and to check diarrhoea. In the stomach tannin combines with any proteid substance there present, precipitating it before the acid gastric juice has been formed. But as digestion progresses this combination is broken up, for peptones will not combine with tannin in acid solution during the second stage of stomach digestion; the astringent action is therefore expended on the walls of the stomach and intestines. Such irritation may induce nausea and perhaps vomiting. Among other bad effects of tannin are a diminution of the normal secretion of the glands.

The volatile oils stimulate the interior of the stomach and thus favor digestion; it is they which give to our breakfast cup of coffee its delicious and soul-satisfying aroma, especially when this beverage of the gods is piping hot. These aromatic oils, unlike the caffeine and the tannin are readily absorbed by cold water.

The coffee bean contains about two-thirds of one per cent. of caffeine; the roasting does not seem to reduce this percentage; so that, since almost all the caffeine is extracted in the ordinary hot culinary process one cup contains from one and one-half to three grains of caffeine (one grain is a minimum, and two grains a fairly strong medicinal dose of caffeine). The wakefulness and the relief from fatigue and the muscular tremors produced by coffee are undoubtedly due

to the caffeine; on the other hand, the feeling of well-being and comfort produced by coffee after a full meal is mostly due to the local action of the volatile oils in the stomach. The same result is produced by preparations of other volatile oils, such as are oftentimes added to coffee in the form of brandy and liqueur. Apart from this local action the volatile parts of coffee seem to have no other effects on the body.

It used to be considered that coffee lessened tissue changes in the body, and that it ought therefore to be included among the foods; it has since been proved that, far from lessening metabolism (the healthy interchange of tissue) coffee increases it, as evidenced by the increase in the excretion of urea and carbonic acid. This is naturally to be expected from the increased activity of the nervous system occasioned by this beverage; like all stimulants, it makes in the end, not for building up, but for wear and tear.

Obviously then, if we are to be benefited and not harmed, we should, under ordinary circumstances eliminate caffeine and tannin from our coffee drinking as far as possible; although for special reasons, when brain and muscular stimulation are desired—and here the wise man will go slow—caffeine may be desirable. And we should take our coffee with food, and not on a fasting stomach. Taken during or after a meal, coffee benefits digestion.

The obvious deduction from these observations is that hot or boiling water should be avoided in making coffee, if we are not to suffer bad results; an infusion should be made with cold water, since in this way one-ninth the caffeine and one-fifth the tannin is extracted, whilst the aroma of the volatile oils is preserved. A concentrated infusion is made; and just before we want coffee we add hot water, hot milk or hot cream (all heated to the boiling point); and a delicious and fragrant cup will be forth coming.

Dr. Robert Amory told in the Boston Medical and Surgical Journal just how we are to proceed: The bean must have been well roasted; and in the roasting have been continually agitated for the removal of loose particles of its envelope, pains being taken to heat thoroughly its interior. Thus roasted it is ground rapidly, to a fine impalpable powder; for the heat from rapid friction will excite the evolution of the volatile oils. This grinding should be done immediately before preparing the extract; if the ground

coffee stands in the air the volatile oils will evaporate. Place now the ground powder in the upper part of a china or porcelain percolator, such as the Austrian coffee biggin, leaving off the cover and the small saucer; put in a lump of ice and pour on cold water from a water tap (not well or spring water), and let the ice cold water drip through the ground coffee, stirring the mixture carefully and thoroughly into a paste-like mass. To facilitate the percolation of the infused watery extract it is advisable to place a small piece of wood between the lower edge of the receiver which contains the coffee grounds and the upper part of the vessel which receives the infusion, as this leaves a little air space between these parts. When the liquid coffee infusion has all dripped through the percolator, pour back through the wet grounds all the liquid from the bottom receiver and allow the percolation to go through the same process as before, replenishing the ice, if necessary. Now put the lower portion of the biggin in a cool place, and put on the cover. We shall, unless too much water is used in the percolation, have a very strong extract; and this is desirable, because in preparing it for the cup we want to add sufficient boiling water to reduce to the required strength. The boiling water will set free the volatile oils which give the heaven-sent flavor.

Don't use a metal biggin or percolator; for the vegetable matter suspended in the liquid infusion will collect in the angles of the bottom receiver and rapidly become the center of decomposition; thus will germs develop which will destroy the suspended particles left in the infusion, the particles containing the agreeable taste of the coffee. Clean china or glass will not collect these micro-organisms to any positive degree, especially when the infusion is kept in a cool place.

Dr. Amory carried such infusions as are here described on trips for three weeks at a time, during which they have lost neither color, strength nor aroma, when kept carefully corked in a cool place. And he assured those who would try his recipe, which he used for eight years, that they will never again make boiled coffee for drinking purposes. He got the tip originally from reading a statement that Col. Younghusband took cold-water infusions of coffee with him during his long journeys into the Thibetan wilds, with most satisfactory results for all the English party.

GET WHAT YOU WANT WHEN YOU WANT IT.

Every housewife in New York can buy groceries by weight if she wants to-a pound of fresh eggs (a bad egg is lighter than a good one) or a pound of molasses; there is a State law to justify her request. It is ignorance of this law on the part of both housewives and tradesmen that has moved the Metropolitan Bureau of Weights and Measures to undertake an educational campaign. Commissioner Joseph Hartigan, of this Bureau, has engaged five women inspectors after civil service examination, and hopes eventually to have fifteen in his employ. Their duty is to go into markets and make inspections. They may disguise themselves so as to resemble more closely the women of the particular district in which they are visiting. If the grocer attempts to sell them a chicken for three cents more than he ought to, thinking they will not understand the workings of his computing scales, he finds to his sorrow that he has tried to cheat an inspector unawares.

On the opening of school the coming fall these women inspectors will teach the children such facts as the purchasing public ought to know. Oftentimes parents are best reached through the children, and if the latter are brought up to demand fair measures and to buy intelligently it will do much in time, considers Commissioner Hartigan, to do away with the high-cost-of-living problem.

The Housewives' League is doing superb work in educating womenfolk to realize their responsibility as purchasers. If they can be taught to insist on fair dealing, if they can be made to feel that the question of marketing is a very important one, and that their intelligence in making their individual purchases has its effect on the rest of the community, it will do much to bring about a better standard in trade.

The Bureau of Weights and Measures

has compiled the following list of "don'ts" for purchasers:

"DON'TS" FOR PURCHASERS.

"Don't be afraid of your tradesman. If you believe he is giving you short weight, or not the proper quality of goods, do not hesitate to insist upon your rights.

"Don't leave your shopping till the last minute and then be in a hurry. It is frequently when a customer is in a great hurry that the dishonest merchant takes advantage of her.

"Don't allow your grocer or dairyman to weigh in the wooden butter dish when he is weighing your butter. These butter dishes frequently weigh, in accordance with their size, from an ounce to three ounces. You will observe some of them very prettily decorated with tin on the edge. Remember, if they weigh these in, they are selling you the tin and the wood at the price of butter.

"Don't buy in a careless manner. That is, always ask for whatever the commodity is by a known weight or measure. Avoid asking for a cupful, five cents' worth, or ten cents' worth, a package, a handful, a glass, a jar, a bag, a basket, a bucket or a tub. All of these terms mean nothing in the law; unless you say a pound or a quart, or a gallon, or whatever amount you want.

"Don't be afraid to carry a bundle, unless you are prepared and willing to stand the expense of having it delivered to your home. A great many bakers who will willingly deliver your bread to your house are delivering you a lighter loaf than the same character of a loaf purchased from the counter and carried home by you. The same is true of a great many other merchants. Somebody has to pay the expense of a horse and wagon. If you are willing to share this expense, well and good, but realize that you are doing it if you have your products sent home."

LABOUR rids of three great evils—irk-someness, vice, and poverty.—Voltaire.

A MIRACLE is an act of natural law not previously understood.



REAL LITERATURE.

THE following editorial in The New York Times is reprinted as a piece of superb literature. It is based altogether on fact on the course pursued by the German transatlantic passenger steamer Cecilie to evade capture by English or French war vessels, Bar Harbor having been the port of refuge:

THE FLYING TREASURE.

Strange to what absurd extremes novelists will resort in their efforts at sensation. Here, now, is one who violates every rule of common sense in an attempt to concoct a more bizarre yarn than any of his predecessors. He tells us that a great liner started one day from New York to Bremen in the same commonplace way in which she had started so many times before, carrying tourists, sightseers, health-seekers; but in addition she was a treasure ship, carrying nearly \$11,000,000 in gold consigned to European bankers.* After three days the moon suddenly shifted from starboard to port, and while the passengers were marveling at the phenomenon the Captain informed them that the nations of the world were at war, that he had been notified by wireless, and that he was fleeing back, not to New York, but to any port into which he could escape unobserved.

So for days, the author tells us, this twentieth-century liner repeated the experience of a Spanish treasure galleon, dodging and turning along the sea lanes to hide from DRAKE or RALEIGH or from the pouncing buccaneers. She was disguised, veiled in canvas, and stole through the darkness ture.

without so much as a candlelight showing. More than half way to Europe, she had turned, and now she prowled along backward, the sea alive to her passengers' imagination—and perhaps in fact—with cruisers hunting for her and the wealth she bore. Through the fog she sped at high speed, dark and unseen, her passengers prisoners on her masked decks, no man knowing her destination, no man knowing when a shot across her bows would mean that the game of hide-and-seek was up.

Meanwhile the whole world was watching for her, speculating on her fate; she was reported in one quarter, then in another; she had landed here, she had landed there, she had been captured. nothing might be omitted to make the story less possible in the prosaic twentieth century, the novelist who conceived this daring fiction placed on board her a group of American financiers, and made them offer to the Captain to buy the treasure ship and sail her under American colors. Finally, to cap the climax, he makes his fleeing liner with its cargo of gold, its passenger list of financiers, and its Captain who is an officer in one of the warring navies, turn upwhere, of all places in the world? Why, in the harbor of a Summer resort, to be greeted by the tangoing, tennis-playing population of Summer butterflies flocking down to the shore to see the unprecedented sight, wondering what liner had gone crazy and left its course, and then discovering that it was the ship for which all the world was looking. No, it will not do; the novelist shows promise, but he must restrain his imagination if he is to make his mark in litera-

THE WISE MAN.

There was a man in our town
And he was wondrous wise,
He filled his store with tanglefoot,
And slaughtered all the flies;
And when he found the flies were dead.
With all his might and main
He tackled germs and weevils then
Till all the "bugs" were slain.

Sanitary counters showed his class.
They keep his goods so clean
That all the women in the town
Now in that store are seen;
He dressed his clerks in snowy white
And made them clean their nails
And now he has of wealth so much
He stacks the stuff in bales.
—Bull. So. Dakota Food and Drug Dept.

THE PRACTICAL MAN.

At this moment, at any moment several million men are saying to several million other men: "You're a theorist." I have had it said to me so often that I'm beginning to wonder-whether there aren't really four sexes in America, men, women, practical persons, and theorists. This at least is certain, there is one sure way to reveal your theorism: ask a practical man what he means by the word practical. He will begin by looking at you with a black despair, as if you had asked him whether two and two really make four. He will consider your question unnecessary and insulting, and he will demonstrate his opinion of you by disdaining to give a satisfactory answer. There is good reason for that: if a practical man defined "practical," he would in that very moment become a theorist.

For a theorist is nothing but a man who tries to think about what he's doing; not satisfied with being on his way, he wishes to know where he's going. Moreover, he's not content to go anywhere at all or nowhere in particular.

"There is only one way to find out what "practical" means—watch what practical men do. That is fairly simple in America. The great mass of them govern this country, its industries, its life and its labor.

And:

In a world of practical men, thousands of babies are badly born, and thousands die of starvation, bad air and inattention.

In a world of practical men, hundreds of thousands receive no education worth the name. There aren't even enough school buildings for children, let alone teachers, let along competent teachers.

In a world of practical men, hundreds of little children are prepared for their lifework in sweatshops and factories. I will not insist here on the fantastic notion that every child should be happy.

In a world of practical men, hundreds of thousands of mothers devote themselves to the establishment of homes by working all day in factories and stores. This is the practical way of promoting the efficiency of the next generation. There are also hundreds of thousands of mothers who are enabled to teach their children frugality and perseverance by turning the parlor into a workshop.

In a world of practical men, thousands die of overwork, or starve for lack of work.

In a world of practical men, there are half a million people in lunatic asylums.

In a world of practical men, the jails are crowded.

In a world of practical men, immense quantities of food are poisoned.

In a world of practical men, politics is bought and sold.

In a world of practical men, the cost of living is exorbitant.

In a world of practical men, infants and idiots can inherit millions.

In a world of practical men, natural resources are wasted.

In a world of practical men, nations go to war.

In a world of practical men, there is a panic about once every ten years.

In a world of practical men, the strike and the lockout, the boycott and the blacklist are in constant use.

In a world of practical men, thought is hired, news is manufactured.

In a world of practical men, some are too poor and some are too rich.

And above all, in a world of practical men, no remedies are proposed. That is the monopoly of theorists. If they might say a word to the practical men, it would, I think, be this:

"Gentlemen, as the ruler of a nation, your success is not conspicuous. As we go among men, we find your prestige very much diminished. To be quite frank, we don't admire you enormously. We don't think your eyes and ears are open wide enough to have learnt the real feelings of this nation. We theorists offer you one hint, take it or leave is: you are sitting an a pile of gunpowder, smoking a cigar.—Walter Lippman in Everybody's Magazine.

WHICH WOULD YOU PREFER?

SMALLPOX.

A virulent virus from a previous case.

The disease: Sharp chills, fever, severe headache and backache, nausea, vomiting, eruption, like to spread so that the whole body is bathed in nauseous pus.

The result: Death in one case out of four or five in severe epidemics. Disfigurement for life in many more cases.

VACCINATION.

Lymph from a selected healthy calf obtained under careful precautions, purified and tested to prove no foreign infection is present.

Vaccinia: Slight local soreness; feverishness and irritability.

Immunity against smallpox.

DIRECTIONS FOR VACCINATION.

HOW to be vaccinated. Before vaccination, a bath should be taken and clean underclothes should be put on. The site of vaccination in particular should be thoroughly cleansed. Cleanliness is absolutely necessary. The part of the arm where the vaccination is made should be washed with alcohol, or with soap and warm water; don't use any antiseptic like carbolic acid or bichloride solution. The skin is scratched slightly by the physician with a sterilized needle which is thrown away after use on

the individual. The vaccine which is kept in pure condition is then rubbed in and allowed to dry.

WHAT to do after vaccination. The local effect of vaccination reaches its height at about the tenth day. On the eleventh day the soreness decreases and the contents of the sore begins to dry. At the end of two weeks a scab forms. After three weeks the scab falls off and leaves a clean circular scar.

No ointment or grease should be applied to the vaccination, and tight shields are not desirable.

The vaccination should be covered throughout the entire period with a freshly washed handkerchief pinned to the sleeve of the shirt, or with a piece of sterilized cotton gauze. This covering should be changed daily.

Only clean boiled water should touch the arm. Above all, dirt should be kept from the vaccination wound. Any unfavorable result follows from scratching with dirty fingers, which introduces infection from outside, rather than from the vaccination itself. If the vaccination is accidentally injured or becomes dirty the family doctor should be consulted promptly. These rules for vaccination are adapted from those given by the New York State Department of Health.

HOW TO SELECT YOUR FAMILY DOCTOR.

THE following question and answer appeared in Dr. Evan's How to Keep Well column in the Chicago Tribune:

Some time ago I saw an article in your columns saying that as long as people would patronize an incompetent physician, simply because of his genial manner, they would have themselves to thank for their misfortunes. As far as I can see, the ordinary layman is in no position to judge a physician, and no one in a position to judge will commit himself further than to say that so-and-so is a recognized specialist in his line. How is the layman to judge a general practitioner?

Dr. Evans answered:

By the judgment and sense he shows in the ordinary affairs of life; by his attendance at hospitals, medical society meetings; by his standing with other physicians; by the books and journal he reads; by his knowledge of medicine, medical judgment and skill. Some of these items are get-at-able in every case, and all of them in some cases. At the present time the opportunities for popular education on medical subjects are so abundant that the ordinary layman should be able to judge fairly well between the physician who knows his business and the bluffing ignoramu.

THE THREE PROFESSIONS.

THE lawyers are the cleverest men, the ministers are the most learned, and the doctors are the most sensible.

The lawyers are a picked lot, first scholars, and the like, but their business is as unsympathetic as Jack Ketch's. There is nothing humanizing in their relations with their fellow creatures. They go for the side that retains them; they defend the man they know to be a rogue, and not very rarely throw suspicion on the man they know to be innocent. Mind you, I am not finding fault with them—any side of a case has the right to the best statement it admits of, but I say it doesn't tend to make them sympathetic.

Suppose, in the case of Fever vs. Patient, the doctor should side with either party according to whether the old miser or his expectant heir was his employer. Suppose the minister should side with the Lord or the devil according to the salary offered, and other incidental advantages, where the soul of the sinner was in question. You can see what a piece of work it would make of their sympathies,

But the lawyers are quicker witted than either of the other professions and other men generally. They are good-natured; or, if they quarrel, their quarrels are above board. They are apt to talk law in mixed company and they have a way of looking round when they make a point that is

mighty aggravating.

The ministers come next in point of interest. They are interesting men, full of good feeling, hard workers, always foremost in good works, and on the whole the most efficient civilizing class—working downward from knowledge to ignorance—that we have. The trouble is that so many work in harness. They feed us on canned meats mostly; they cripple our instincts and reason and give us a crust of doctrine. They used to lead the intelligence of their parishes; now they do pretty well if they keep up with it, and they are very apt to lag behind it

Then they must have a colleague. The old minister thinks he can hold to his old course, sailing right into the wind's eye of human nature as straight as that famous old skipper, John Bunyan. The young minister

falls off three or four points and catches the breeze that left the old man's sails all shivering. By and by the congregation will get ahead of him, and then it must have another new skipper. The minister is coming down, every generation, nearer and nearer to the common level of the useful citizen—no oracle knows it all, but a man of more than average moral instincts who, if he knows anything, knows how little he knows.

The ministers are good talkers, only the struggle between nature and grace makes some of 'em a little awkward occasionally. The women do their best to spoil them, as they do the poets. Now and then one of 'em goes over the dam. No wonder! They're always in the rapids.

The doctors have not half the general culture of the lawyer nor a quarter of that of the ministers. I rather think, though, that they are more agreeable to the common run of people than the men with black coats or the men with green bags. People can swear before 'em if they want to, and they can't very well before ministers. I don't care whether they want to swear or not-they don't want to be on their good behavior. Besides the minister has a little smack of the sexton about him. He comes when people are "in extremis," but they don't send for him every time they make a slight moral slip—tell a lie, for instance, or smuggle a silk dress through the custom house. But they call in the doctor when the child is cutting a tooth or gets a splinter in its finger.

So it doesn't mean much to send for him, only a pleasant chat about the news of the day. For putting the baby to rights doesn't take long. Besides, everybody doesn't like to talk about the next world. People are modest in their desires. But everybody loves to talk physic. Everybody loves to hear of strange cases; people are eager to tell the doctor of the wonderful cures they have heard of. They want to know what is the matter with somebody or other who is said to be suffering from a "complication of diseases," and, above all, to get a good hard name, Greek or Latin, for some complaint which sounds altogether too commonplace in plain English.

If you will only call a headache a cephalalgia it acquires dignity at once and a pa-

tient becomes rather proud of it.

So I think doctors are generally welcome in most companies.—Oliver Wendell Holmes.

CORRESPONDENCE.

April 10, 1914.

EDITOR, DIETETIC AND HYGIENIC GAZETTE,

87 Nassau Street, New York City.

Dear Sir:-

I was interested in reading in your March issue Doctor J. B. Huber's article with the caption "Nothing But a Cold." The article is written very intelligently and the advice is certainly well worth following. The Doctor says in part:

"Nevertheless consumption, the Captain of the Men of Death, holds the greatest record for human suffering and human fatality."

Several years ago this statement was correct. Mortality statistics show that the death rate from tuberculosis is gradually decreasing, while the death rate from diseases of the circulatory system and genito urinary system is rapidly increasing.

In the New York Medical Journal of July 12, 1913, there is the following:

"LONGEVITY AND REJUVENESCENCE.—BY NASCHER.

"According to the 1910 report of the field secretary of the Provident Life Assurance Society of England, the death rate from diseases of the heart, kidneys and circulatory system, including apoplexy, has increased 105 per cent. in the United States since 1880, while in England the increase in deaths from these diseases during this period was only three per cent."

The cause of this increased mortality from heart and kidney diseases is undoubtedly due to errors in our dietary. It has been demonstrated that the daily average consumption of salt in the United States is 300 grains, whereas but 15 grains are utilized by the system, thus leaving 285 grains of a mineral substance to be excreted principally through the kidneys. The elimination of this amount of a mineral substance undoubtedly injures the kidneys and the medical fraternity are fast learning this fact as they are now advocating a salt-free diet for all diseases of the circulatory system, genito-urinary system and digestive system; also in diseases of the respiratory system.

There is a cause for this increased mortality from the above mentioned diseases and the sooner the cause can be located the sooner will the span of life be lengthened. If the exclusion of salt from the dietary is beneficial when some of our organs are deranged, is it unreasonable to suppose that the exclusion of salt from the dietary of the well would prevent the heart and kidneys from becoming diseased? It need not be necessary to exclude all salt, as the system requires 15 grains. It would be difficult. however, to educate the public to realize the deleterious effect of chloride of sodium. which has been used, one might say, since the world began.

Yours very truly, H. L. HARRIS,
• 100 William Street, New York City.

THE PUNISHMENT FIT THE CRIME.

In the year 1481 Jacques de Tourzel, Sieur d'Alegree decreed the following punishments for adulteration and other sins against pure food.

"Any man or woman who sells watered milk shall have a funnel thrust into his or her mouth and be compelled to drink as much watered milk as in the judgment of the surgeon can be borne without danger to life. Any man or women who sells butter mixed with beets, stones, or other objects with the object of increasing the weight, shall be arrested and put in our pillory. Then the butter shall be placed upon his or

her head and there remain until it shall have been melted by the heat of the sun. The dogs shall be allowed to lick them, and the people may scold them with any words its pleases them, provided that neither God, the King, nor any other persons be thereby libeled. If the weather is cold a fire shall be built in front of the guilty one. Any man or woman who sells rotten eggs shall be bound to the pillory and the street urchins shall be given the rotten eggs, that they may therewith pelt the offender, to the amusement of the people, but it shall be forbidden to throw at them any other object than rotten eggs."

SUPERLATIVE POETRY.

HOW SLEEP THE BRAVE.

How sleep the brave, who sink to rest By all their country's wishes blest! When Spring, with dewy fingers cold, Returns to deck their hallow'd mould, She there shall dress a sweeter sod Than Fancy's feet have ever trod.

By fairy hands their knell is rung; By forms unseen their dirge is sung; There Honour comes, a pilgrim grey, To bless the turf that wraps their clay; And Freedom shall awhile repair To dwell, a weeping hermit, there!

-William Collins.

NEW WARS FOR OLD.

By Alfred Noyes.

I.

Peace! When have we prayed for peace?

Over us burns a star

Bright, beautiful, red for strife!

Yours are only the drum and the fife

And the golden braid and the surface of life!

Ours is the white-hot war!

II.

Peace? When have we prayed for peace?
Ours are the weapons of men!
Time changes the face of the world!
Therefore your ancient flags are furled,
And ours are the unseen legions hurled
Up to the heights again!

III.

Peace? When have we prayed for peace?

Is there no wrong to right?

Wrong crying to God on high

Here where the weak and the helpless die,

And the homeless hordes of the city go by,

The ranks are rallied to-night!

IV.

Peace? When have we prayed for peace?
Are ye so dazed with words?
Earth, heaven, shall pass away
Ere for your passionless peace we pray!
Are ye deaf to the trumpets that call us to-day,

Blind to the blazing swords?

-From Collected Poems, Frederick A.

Stokes Co.

THE PANGS OF VICTORY.

Unswerving lance or falchion sure.
With hardihood I meet;
But help me, Heaven, to endure
Their death whom I defeat!
Richard Kirk, Harper's Weekly

SONG.

Think of nothing but the day: Yesterday is dead and gone, And to-morrow will not stay Longer than another one.

Why should time, that cannot mar One triumphant rose's scent. Stint our joys, because they are Blossoms, fair not permanent?

Any joy like any flower
Has its instant blossoming:
How can even time have power
Over either perfect thing?
From Arthur Symons's 'Knave of
Hearts'' (Lane).

"SCIENCE AND ROMANCE."

By "W. de H. R." in the Contemporary Review.

They strive to bind in words the winds' wild race,

In words to curb the salt waves' made career;

The stars that disperse night's opal face,
And all the world's strange music that I
hear

Are but to them as to the Roman seer, Whose madness sought the nature of each thing,

Robbing the elements of all their fear, Yet stilling Fancy that erstwhile did sing.

To them the Winter brings no weeping world,

No tremor ushers in the Spring's new birth,

The gaunt, brown leaves by wild October hurled

Mean not to them the sorrows of the Earth—

Still shall I hear the song of flowers to be, And catch the myriad voices of the sea.

NUGGETS.

FROM THE SURVIVOR BY E. PHILIPS OPPENHEIM.

"THERE are so many things," he said, speaking softly and half to himself. "Last week, Cicely, I took a compass and a stick and I walked across the hills to Rydal Mount, where Wordsworth lived. When I came back I think I was quite content to spend all my days here. It is such a beautiful world. Some day when you have lived here longer, you will know what I meanthe bondage will fall on you too. mountains with their tops hidden in soft blue mist, the winds blowing across the waste places, the wild flowers springing up in unexpected corners, the little streams tearing down the hillside to flow smoothly like a belt of blue ribbon through the pasture land below. The love which comes for these things is a strange, haunting thing. You cannot escape from it. It is a sort of The winds seem to tune thembondage. selves to your thoughts; the sunlight laughs away your depression. Listen! Do you hear the sheep-bells from behind the hills there? Isn't that music? Then the twilight and the darkness! If you are on the hillton they seem to steal down like a world of soothing shadows. Everything that is dreary and sad seems to die away; everywhere is a beautiful effortless peace. Cicely, I came back from that tramp and I felt content with my lot, content to live among these country folk, speak to them simply once a week of the God of mysteries, and spend my days wandering about this little corner of the world beautiful."

Two hours later he walked out into the cool night air a new man, with head erect, his brain clear, swept clean of many sickly phantoms. His virility was renewed, he looked out once more upon life with eyes militant and brave heart. He was full of

the sense of having passed through some purging and beneficent experience. It was not that his religious belief or disbeliefs had been affected, or even quickened by anything he had heard-yet, from first to last, those two hours had been full of delight to him. The vast, dimly lit building, with its imposing array of statuary, shadowy figures of great statesmen, soldiers, and priests seen by him then, as it chanced, for the first time, woke him at once from his lethargy. Religion seemed brought in a single moment into touch with the great things of life. There were men there who had been creedless, but great; genius was honored side by side with sanctity. rolling music, the pure, fresh voices of the boys appealed to his sense of the beautiful, as those historical associations awakened his The white-robed priest, who ambition. stood in the centre of the great building yet whose voice without effort seemed able to penetrate to its furthest corner seemed both in his personal self and in his scholarly diction exquisitely in accord with his great surroundings. Without a manuscript, with scarcely a note, he stood there, calm and imposing, the prototype of the modern priest, pleading against worldliness for the sake of beauty and of God. With delicately chosen words and exquisite imagery, the calm enthusiasm of the orator, always self controlled and sweetly convincing, seemed to Douglas like the transmutation of a beautiful picture into a beautiful poem, instinct with life, vivid and thrilling. He stayed till the sermon was over and the solemn words of the benediction pronounced, till the deep, throbbing notes of the organ rang down the emptying aisles. Then he walked out into the streets a saner and a better

"You keep a joint bank account with your wife, do you not?" "Yes, I deposit the money and she draws it out."—Boston Transcript.

TERRIBLE though it may be to have to say it, a man's worst punishment in England only begins after he has left prison.

"If you have an idea, cage it. Ideas have the wings of the morning and may take eternal flight unto more responsive territory."

[&]quot;The mills of the gods never shut down on account of a strike."



[&]quot;When you proposed to her, why didn't you tell her you were unworthy of her? That always makes a hit."

[&]quot;I was going to, but she told me first."

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M.D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE UNITIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN TEMS

COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

GETTING OUT OF THE RUT.

We lose vigor through thinking continually the same set of thoughts. New thought is new life.—Emerson.

A NURSE in a recent convention made telling use of the complaint of a certain critic that our present system of nursing education is no system at all. It speaks well for our nursing organizations that they had the patience to listen to such a criticism and to entertain the thought in their minds. wholesome discontent with our present order of things is our strongest guaranty of a better future. Those schools that are satisfied with things as they are to-day will be in the rear of the procession to-morrow. Our intellectual activity can almost be measured by the public interest in better educational methods. The public schools are subjected to a continuous fire of criticism which is equalled only by the activity of educational experts in devising improvements to satisfy the critics as well as the friends of the schools. The application of this idea to professional education is well stated by Dr. John L. Heffron, of Syracuse, N. Y., who says: "Education is in flux. It is never stable. What seems a truth to-day may tomorrow be revealed as but a half truth. We grasp what is in sight to secure what is better beyond and we advance by such meth-The ideal is always just ahead and woe is he who believes that he has attained it for to such there is no ideal."

Let us then take heart when the critics do us the honor to notice the faults of our present systems of nurse training. Improvement is bound to be the result.

We are using these words as an introduction to the editorial by Miss Annette Fiske which we reprint in full from the News Letter. The principle which she defends so well is not new in itself because it has been applied for years, with great success, in more than one training school. It will be a new idea, however, when it is introduced as a modification of the course in schools

that have long stood out against it. And we predict that this very thing is about to happen sometime and somewhere, and that it is one of the changes that will put new life into the training of nurses and make them fit for work which is to-day all but impossible for many graduates from some of our most pretentious "training schools"—schools which do not train for the business that the nurse has to do after graduation.

"Resolved that the Executive of the Graduate Nurses' Association of Ontario disapproves of pupil nurses being sent out by the hospitals to do private nursing during their training as it is unfair to the pupils themselves, and also to the graduate nurses." This statement appears in a letter printed in the Canadian Nurse for May. Later on, in the editorial, a similar stand is taken on the subject of the sending of pupil nurses into homes. Thus it is stated that "Pupil nurses should not be exploited by hospitals to re-plenish their treasuries. These young women go to these hospitals in all good faith, for the education and training that will fit them to be worthy members of the nursing profession. Are they getting this education and this training when they are thus sent out away from supervision? We think not." Together these statements form about as satisfactory an exposition of the views of those opposing the sending out of pupil nurses to the home as one meets with and it may be well to consider how much it amounts to and how much truth there is in it. There is one point, however, which should first be noted. If the pu-pils who are sent out are really "sent out away from supervision," that is undoubtedly wrong. Pupil nurses should be under supervision all the time or they cease to be pupils for the time being. Granted, however, that their work in the home is supervised, is it true that their being sent out is unfair to them and to the graduate nurse?

Take the case of the pupil nurse herself. She comes to the training school, as has been said, for the education and training that will fit her to be a worthy member of the nursing profession. After graduation what branch of nursing is she, in common with the majority of nurses, most likely to take up? Private nursing, is she not? And what better preparation could she have for private nursing than nursing in the home under supervision while still a pupil? One frequently sees

the statement that the private nurse is not worth so much the first year after graduation because she has to learn to adapt herself to new nursing conditions. Why not learn these conditions, then, and how to work in them before graduation, instead of after one is supposed to be a fully competent nurse? It would seem to be better for the nurse and better for the patient also that she should do so. Besides, when sent out on case work, the student nurse not only learns to make good in the branch of nursing she is to follow later, but she gets acquainted with families and doctors who, if they like her work, will employ her later on. It would seem, therefore, to be distinctly to her advantage.

As for the home work of the pupil nurse being unfair to the graduate, it has been shown how case work as an undergraduate often brings case work as a graduate. Aside from this, however, it speaks very badly for the fully trained nurse if she cannot hold her own in competition with those partially trained. The lower price charged would not compensate for poorer service and people would take the better nurse if they could pay the price. If people who can afford graduate service prefer to have undergraduate service, it must be because the undergraduate nurse makes herself more agreeable or more useful. If they do not prefer it, no injury is done to the graduate. If they employ the undergraduate because they cannot afford the graduate, the fact that the undergraduate was not sent out would not make them any better able to pay the higher price. Any graduate who knows her work and makes herself agreeable in the home need not fear the competition of pupil nurses where people can afford her prices.

ARE WE DIRTY BY NATURE, OR JUST THOUGHTLESS?

A LITTLE fellow had "barked his shins" in an accident on the playground and was receiving some necessary but painful attention at the hand of the school nurse. After bravely suppressing a howl or two he looked up to his benefactress and tearfully remarked, "If I was a dog I cud lick them sores well." If it had been his thumb, of course he would have had it in his mouth,

just like a boy.

We can't blame the children when their mothers persist in setting a bad example. Many mothers who ought to know better will moisten their nipples with saliva before offering them to their long suffering babes; and if they use a nursing bottle, of course they have to taste the milk before they can give the infants a chance. Is this nature or perversity? They are no worse than the ignorant midwife who bathes the baby's eyes with her own saliva "just to wash away the sleepy dust,"—and then for-feits her "diploma." By the way, who does not remember some really "intelligent" mothers who, in times of stress, have been known to "clean up" a dirty child's face with a corner of the towel moistened frequently in their own mouths, thus literally "licking the child into shape." Perhaps there is "company" waiting in the front room and no time to hunt up the "wash dish" and do things up in style.

One evening we stood at the public writing desk in a large post-office. A very warm woman was perspiring in the effort to scrawl a letter with a lead pencil. It was a great undertaking for her, and she suddenly discovered that she had made a bad

mistake, "got mixed," and would have to erase a line or two. "Has any of youse got a pencil with a rubber onto it?" she asked in plaintive tones. A man standing near thrust a very dirty hand—which had been holding his cigar stub—into his pocket and produced an eraser which he gallantly brought to the rescue. For some reason it didn't take hold very well and the man said, "Just moisten it well with saliva." Into the woman's mouth it went very promptly and she had no more trouble with her corrections. The rubber was restored to its accommodating owner with a hearty "Thanks."

Some ladies would criticise such a performance—and then hold a coin or two in the mouth while fumbling around for the purse, just a little change passed to them by a newsboy or a conductor. People whose intelligence will not allow them to "stand for" such a piece of carelessness will save the twine from all sorts of bundles and when they use it again invariably insert one end in their mouths, just like the other person who used it last. And so they go on through the world, sticking their fingers in their mouths while they turn the leaves of old books—or mayhap new ones—old bills, or draw a pair of dirty gloves on their hands; using their mouths to hold pins, clothes-pins, street-car transfers, knots, and kiss all babies within their radius.

We think we have done our whole duty when we urge this sort of people to abolish the common towel and drinking cup. We will have to start a long way back of the towel and the cup if we mean business in our sanitary reformation. By the way, we made some amusing observations on the virtues of the individual cup as we were traveling through the good state of Ohio on a recent very warm day. There was a family party which took up about three seats in the railway coach. They all became thirsty at once and sent one of the restless boys to the He filled a paper cup and water tank. brought it back to his kinfolks who sipped the ice water, seriatim, until every one had a good taste; then the cup was refilled twice and every one took a turn or two more at it. What that "individual cup" did for that coach full of passengers was simply to limit the contagion to that one family. It was a good thing!

No wonder our national tendency to be miscellaneous manifests itself outside the sacred precincts of the home, as well as inside. A "sanitary crank" in Indiana relates in the board of Health's Monthly Bulletin a few things that he has seen on his travels. We will repeat some of them, although they don't sound "nice," and we would observe that our readers can see similar sights themselves without going to Indiana.

I have seen a waiter wipe his sweaty forehead with the towel he carried on his arm for wiping dishes.

I have seen knives, forks and spoons, which had been used a short time before, simply wiped on a not too clean tea-towel without even dipping them in water.

I have seen tumblers, after having been used at table, simply wiped with a not too clean tea-towel without even dipping them in water.

I have seen knives, forks, spoons and tumblers, after use at table, rinsed in greasy, yellowish dish water and then wiped with a tea-towel which was an approach to rubber roofing in color.

I have seen restaurant kitchen help pass hands through hair and then handle sliced bread.

I have seen two mice jump out of a bread box and the sliced bread therein sent to the table as if nothing had happened to it.

I have seen a waiter pick two flies out of a glass of milk with his fingers and then place it on a table to be drank by a child.

it on a table to be drank by a child.

I have seen a basket of lettuce sitting on the floor in a restaurant kitchen and a dog belonging to the cook, but never mind—.

If we were to carry our observations into the realm of "sloppy" nursing, we could a tale unfold, indeed. Now is the time not only to preach but to practice cleanliness in everything, and let us thank God for the "particular people."

THE OFFENCES OF THE COCKROACH.

WHILE swatting the fly we should not forget to pay our attentions to the cockroach, an insect with a diabolical role all its own. Science has been investigating its record and finds it guilty of distributing bacteria and filth, and making itself a general Dr. C. C. Morrell tells us in nuisance. the British Medical Journal that the cockroach "will eat almost any edible material, and, in addition, such materials as sputum, pus, decaying refuse, books, and even blacking. It has been shown that contamination with its fæces will bring about the souring of milk, and the insect is in all probability an active agent in the souring of milk kept in kitchens and larders; and, in addition, is undoubtedly a very important factor in the distribution of moulds to food and numerous other articles, especially when they are kept in dark cupboards and cellars where cockroaches abound. The cockroach may also play a small part in the dissemination of tuberculosis and in the transmission of pyogenic organisms."

The doctor has studied the live-history and biology of this pest and also made a series of experiments to determine the possibility of its acting as a disseminator of disease and contamination. He finds that the cockroach is becoming more widely distributed over the globe every year, and that the "numbers of these insects are rapidly increasing, and unless preventive measures are adopted the insect is likely, in the course of time, to become a very troublesome and possibly a very dangerous domestic pest."

The cockroach is not so hard to fight as are many other insect pests. A well built house—one with dry cellars, walls and floors, without crannies, cracks or dark corners in which insects can live, particularly

around the kitchen, will discourage the cockroach in every endeavor to colonize the commissary department. An old house, built on ancient lines, and offering inducement for vermin to make it their home, should be repaired so as to make it *dry* throughout and as tight as possible. Cracks and holes should be puttied up and thoroughly painted.

Finally, every house, new or old, should be kept as clean as good housekeeping can make it and should be kept free from excessive moisture, by means of proper ventilation and heating. Powdered borax or boric acid, liberally distributed wherever the insects are found, often acts as a good preventive.

"ROPY" MILK.

MILK that has stood for a time, even in a good refrigerator, sometimes acquires a slimy or "ropy" consistency quite unlike that of ordinary rich milk. Cream separates slowly from slimy milk and sometimes does not rise at all; hence milk in this condition is unfit for the production of butter. Of course, "ropy" milk is far from appetizing and yet, strange to say, it is generally wholesome.

Many people have an idea that the ropy consistency of milk is due to adulteration or to preservatives added to increase its "keeping" qualities in hot weather. This theory is wrong, as can be proved by testing for the various preservatives and adulterants.

There are about a dozen different forms of bacteria, occasionally found in milk, any one of which produces the changes described above. One of these, a bacillus named after Guillebeau, causes an inflammation of the cow's udder which makes the milk ropy before it is discharged. Another germ, one of the micrococci, produces sliminess within five hours after milking. The other bacteria causing this form of deterioration require longer times for their action, varying usually with the temperature of the standing milk. Some of these germs develop a bitter or disagreeable taste along with the change in consistency.

TEETH OR TALENT?

DENTAL inspection in the schools of Ann Arbor proves to be one of the most profitable features of medical inspection, and meets with the enthusiastic approbation of the citizens. Oral Hygiene quotes from several prominent people who write in its favor. The statement of Mr. H. W. Nickdls, better known as a musician than as a business man, is worth quoting because he gives his own hobby a secondary place as compared to the importance of a healthy mouth. Not every man is wise enough to hold such a view. He says: "In fact, more people suffer in after life from defective teeth than suffer from an incomplete knowledge of music and drawing. Better far do

without music and drawing in our public schools than not to have Dental Inspection on the curriculum. This is a work to be encouraged and promoted in every school in the land."

Music or no music, art or no art,—this view tallies with the joint verdict of sanitarians and teachers who have made a serious study of the subject:

"As a result of bad teeth and unsanitary mouths the physical development of the child is seriously retarded. The more the physical development is disturbed, the less in general is the mental capacity. The worse the teeth, the worse, as a general rule, is the school standing."

PUNISHMENT OR PREVENTION?

What shall be done with the poor blunderer who commits crime because he doesn't know better—because he is irresponsible for his acts? We have executed a good many of them in the past. We have a good many of them in our prisons and penitentiaries now, supposed to be suffering the "penalty" for acts which they performed under the impulse of diseased or defective minds. Is this the way that an intelligent government should deal with a dangerous and irresponsible element?

A most impressive group of portraits is published in the News, the Bulletin of the New York State Charities Aid Association. Here are the pictures of the man who killed President McKinley, the murderer of the Herkimer County school teacher, and other men who have attempted to take the lives of prominent officials. They are brought together in this place because they are all feeble-minded—belonging to a group whom people generally regard as harmless and innocent. Innocent they are, indeed, although often suffering the extreme penalty under the law for their actions, but harmless they never will be until they are segregated away

from temptations and opportunities for doing harm.

We know now how to detect feeble-mindedness and we know how to prevent its increase, with all the toll that it levies on the tax payer and the worker in our industries. Shall we do it or wait until we are further than ever in debt to this expensive element of our population? Two excerpts from the *News* will help to impress the truth on our minds:

There are approximately 32,000 feebleminded, or one in every three hundred people, throughout the State of New York. Upon this fact all authorities agree.

Out of this 32,000 feeble-minded population only about 5,000 are cared for in institutions designed for them, 4,500 are confined in institutions not intended for their care, while about 22,500, or almost two-thirds of the whole, are at large in the community, at liberty to reproduce their kind and perpetuate the race-menace of increasing feeble-mindedness.

Two Chautauqua County children are now on the waiting list of the institution for the feeble-minded at Syracuse. Their mother has been on the waiting list of the institution at Newark for some time. If she had been committed to Newark as a young girl she would not now have two children applicants for admission to Syracuse.

A MAGNETIZED NEEDLE HOLDER.

This idea originated with Dr. Cheney M. Stimson, of Philadelphia, from whose report in the *New York Medical Journal* we take the following:

Some time ago it occurred to me that if a magnet was placed in the end of a needle holder, it would greatly facilitate the handling of the surgical needle. Not only would it aid in picking the needle from the table, thus rendering it more accessible for adjustment in the jaws of the holder, but it would be of distinct advantage in regaining needles and pieces of needles which had accidentally fallen into inaccessible places in the field of operation. With this object in view I had an ordinary Doyen needle holder magnetized and found that the idea was practicable. The instrument would not only pick up and hold one needle, but was capable of attracting and holding several needles of various sizes and at any place thereon where the jaws of the instrument happened to make contact. It then occurred to me that this phenomenon of magnetization might be influenced by the various changes in heat and moisture to which surgi-

cal instruments are subjected. I therefore placed the magnetized instrument in boiling water and let it remain for half an hour; there was no apparent change in its attractive power. Its magnetic power was also tried in water and in the various antiseptic solutions and found to be unimaized.

and found to be unimpaired.

Magnetization is not affected by the temperatures of sterilization. The harder the steel the more difficult to magnetize, yet hard steel retains its magnetization longer than soft. Magnetized to saturation hard steel will hold its magnetism permanently, provided it is not subjected to sudden, heavy blows, to intense heat, or to powerful electrical currents. Because of its comparative hardness, the steel of ordinary needle holders, so called spring steel, is susceptible of considerable magnetization and, according to the degree of hardness, will retain magnetism for various periods of time. For magnetization, however, the instrument should be hardened just to that degree where it does not become brittle.

The author gives detailed directions for magnetizing needle holders and other objects of steel.

THE PATIENT IS INSANE, WHAT NEXT?

By Dr. BAYARD HOLMES, CHICAGO, ILL.

THERE is no emergency in life which the family is so poorly prepared to meet and none in which public opinion is so at variance with common sense as the onset of insanity in one of its members.

Insanity is a symptom of many conditions: old age; acute infection, such as typhoid and pneumonia; alcoholism; and several of the critical periods of life. On account of the various causes of insanity, the search for which is now only in its beginning, and because these insanities manifest themselves in so many different ways, it is extremely difficult to make any general remark that will not at once arouse very positive and well-founded exceptions in the minds of those who are familiar with the conditions.

It is well to consider a few matters as axiomatic, which we have no space here to discuss. In the first place every member of the family must understand that in spite of a contrary public sentiment it is far less disgraceful to be insane or to have insanity in one's family, which is an unknown disease, than it is to suffer an attack of the grippe or to have a member of the family come down with typhoid fever or tuberculosis, which are perfectly known and preventable diseases. In the second place it should be distinctly understood that every form of insanity requires just as prompt and skillful hospital treatment as a typhoid fever, a pneumonia, or a ruptured appen-This is a fact, although there are not six cities, or other communities in the United States in which there is a general hospital that will admit an insane person to the same prompt and skillful treatment as the beforementioned conditions receive. It is one of the most inexplicable and humiliating facts that even the largest general hospitals in practically every city of the United States are wholly unprepared and unwilling to take care of insane persons. It is further almost incredible that medical men who practice psychiatry in the largest cities have no properly equipped general hospitals in easy reach, to which they can remove, and in which they can care for the acutely insane. In the third place, the hospitals for the insane have been established by all the states in the Union and these institutions are not able to admit patients until these sick folks have been legally committed,—a process which requires in some states as many as ten days, and the actual, physical appearance of the patient (!) in an open court of law. This barbarous, inhuman and destructive legal ceremonial is as disastrous to the mind diseased as it would be to the brain compressed by hemorrhage from a ruptured middle meningeal artery or a depressed fracture of the skull. If every case of appendicitis, mastoiditis, or cerebral compression from fracture, hemorrhage or abscess, had to be taken for ten days to a court of law and adjudged suitable for hospital treatment, the results would be no more disastrous for these patients than it now is for the insane.

To show the dreadful acuteness and severity of insanity, it may be noted that in Albany, New York, where an enlightened profession and an intelligent community provided a pavilion in the general hospital for the reception and treatment of the suspected and acute insane, 234 patients were admitted during one year, of whom twenty died in the acute stage of the disease. This is nearly ten per cent. Moreover seventyfour did not improve and had to be committed to institutions for the insane, while 126 recovered completely or were so relieved that they did not need commitment. In the observation wards of the Glasgow general hospital, the percentages of death during a decade varied between fifteen and twenty per cent. of the admissions each year. number that failed to recover and eventually were certified and committed to asylums was only about twice as many, or thirtythree per cent. of the admission.

The possibility of recovery from an acute attack of insanity is largely dependant upon prompt relief; and in this disease, relief can be looked for only where the appliances are suitable, the attendants skillful and well trained, the medical and surgical faculty alert to all the possibilities that give rise to mental disturbance, and the treatment aggressive.

There are several conditions of life under which mental aberration is prone to appear. Some of these conditions are so well recognized that patients generally get prompt and efficient treatment, while others are so rarely considered by the laity and by the general practitioners of medicine that it is difficult for the consulting alienist to persuade them

of the danger in which the unfortunate and eccentric patient is found.

Probably the most expected or anticipated mental breakdown comes toward the end of life and is manifestly due to the physical conditions of old age. These mental aberrations, however, are of such a nature that they can often be dealt with at home under the care of a wise and cautious physician and an experienced and tactful nurse. The economic complications of the insanity of old age, increase with the financial resources and obligations of the patient. While perhaps the majority of old men and wealthy old women maintain to the very last a fair degree of economic and financial judgment in spite of the fact that their lapses in other directions are frequent enough, far too many of them commit economic errors which ought to lead them to completely safeguard their business responsibilities at a comparatively early age. A conservator can be appointed by the court with the consent of the patient or this can be done at the instigation of the family itself. It is possible that in the progress of society old people will be required at a certain age to select an officer who will thereafter visé and legalize their subsequent fiscal acts.

Insanity is apt to appear in women during their pregnancy and after their delivery. This condition must be looked upon as one of the possible complications of childbearing, especially if these events have been frequent and crowded. Such a puerperal insanity needs and deserves the promptest and the most scientific treatment. The care of such a patient should not be left in the hands of the obstetrician and the obstetrical nurse, but the patient should be at once removed to a hospital in which there is such mechanical equipment as will prevent her doing damage to herself or her child, and in which medicinal or other restraints will be unneccessary. The results of prolonged, repeated puerperal manias are disastrous to mental integrity.

After the age of twenty-seven and until about forty-five, men, and in a less degree women, who have suffered of syphilis early in life, are subject to the onset of a disease of the greatest gravity and the most rapid fatality, known as general paresis,—a disease in which insanity is the principal initiatory symptom. In its beginning, however, this is a condition difficult of diagnosis, and in many of its forms likely to give rise to the most disastrous family and economic

blunders. It is sure to be very rapidly destructive to the patient's mind and life. While the patient may not appear to the ordinary individual as eminently crazy and fatally marked for a progressive disaster, to the experienced alienist he is most dangerous to his family, to his business associates and to himself. The greatest wisdom is shown in a prompt diagnosis and in his immediate and complete retirement from the world of affairs and his preparation for a more or less rapid end. Fortunately, with the better methods of physical diagnosis furnished by the examination of the blood, and the cerebro-spinal fluid, the chances of an early diagnosis are greatly increased. It is unwise, unsafe and ultimately impossible for such a person to be taken care of at home and he should be immediately committed and placed in one of the institutions of the state.

In England and in most of the states of the Union the delirium of an habitual drunkard is not considered an insanity, and a patient suffering of such a condition is not subject to commitment. A physician who certifies that an alcoholic is insane is in danger of prosecution for libel. In the state of California, drunkenness, as well as insanity, subjects the patient to commitment. There is growing evidence that a larger and larger number of habitual drunkards are such because they are primarily crazy and the mental aberration is covered up for a time by the more prominent and the more conspicuous symptoms of alcoholism.

Again, there are at least two special forms of mental aberration, which seem to be brought on alone by excessive or pro-The growing tracted alcohol poisoning. use of methyl alcohol in the various arts and the careless use of medicinal intoxicants and poisons is producing a considerable number of cases of insanity which should receive the earliest and promptest isolation and protracted hospital treatment. The symptoms in these cases are not those glaring ones that precipitate legal commitment, yet they are of such a nature that they are readily recognized, while the patient has sense enough to permit voluntary commitment. In any such case the profession should stand together and have the support of the legal profession in placing every person threatened by his occupation, by his medication, or by his drug habit, with insanity, in the care of the institutions for the insane, where alone there is any promise of restoration to health and usefulness.

In Europe where the sick indemnity prevails, administered by the trade unions and an official fiscal and medical staff, these patients are placed in hospitals very early on the appearance of the disease, and an incredibly large portion make perfect recoveries. Moreover, through education of recovered patients and through a modification of their occupational surroundings and their habits of life, and through the interested espionage of their group, and the officers of the government, recurrence is generally prevented. With us, however, recurrence is the rule.

About one-third of all the commitments to our asylums and hospitals for the insane are persons in the prime of life who are attacked with an incurable malady sometimes called adolescent insanity, and sometimes called dementia precox. This is a disease which affects the two sexes in about equal proportions. It shows itself, as a rule, from sixteen to twenty-three in girls, and from eighteen to twenty-eight in boys. It generally comes on gradually with eccentricities of conduct, increasing shyness and bashfulness, and is attended by peculiar acts that at last accumulate into an explosion of unreasonable conduct that draws attention to the progressive disease. When there is the least suspicion of the onset of this terrible malady, a wise, tactful and considerate physician or alienist should be called, and the patient's habits and methods of thought as well as his nutritional condition, should be carefully considered. It is often possible by immediate isolation from previous cares and surroundings, and by a training in proper habits of life, to restore such a young person to health. The physician's advice in this matter should be implicitly followed regardless of sentiment, maternal or paternal anxiety, and the conflicting advice of neighbors and friends.

We have not spoken of the most hopeful forms of insanity because they are not recognized under any definite and comprehensible name. Fortunately, about one-third of all the insane are in the class.

The most troublesome and the most hopeless of the insane are the small group known as the paranoiacs, because they can never be made to realize their own condition and they frequently remain at home and bring disgrace upon their friends, make trouble in the community, and an-

tagonize public opinion toward the more unfortunate insane.

Practically the only other form of insanity which can be looked upon as incident to the ordinary crises of life, outside of senile insanity and adolescent insanity, is that which affects women at the menopause. It is probably due to the changes in their internal secretions and the peculiar sensations which occur at this time. It is not often an insanity of such a violent type as to secure prompt attention, but the subsequent mental integrity of the patient depends upon such careful treatment that no pains should be spared in securing the best advice at the earliest possible moment. One of the most important matters is the promotion of the patient's excretions and secretions. The stay of such a patient at the baths or at the mineral springs or even at the sea for a season will often tide over a threatening mental breakdown and guarantee for the woman a quarter of a century of the most active and unperturbed existence.

Let us assume now that some members of the family think it possible that a certain other member of the family is insane. What should be done? Manifestly the first duty is to get the family physician or some other physician in whom the family has the most implicit confidence, not alone as a physician and man, but as a friend and counsellor, to come in and hear the evidence and make the diagnosis between sanity and insanity if he can. In any case, his counsel should be sought and his advice should be followed implicitly. As a rule, the family is very poorly placed to judge of the sanity or insanity of one of its members. The greatest strite often arises in the family over even the examination of one of its members accused of eccentric or irrational conduct. The physician himself, if, in spite of the adverse judgment of the most influential or the most numerous members of the family, he considers the patient insane, is likely to be severely criticised, regardless of the ultimate result. On that account the deliberations should be undertaken with the most conciliatory and considerate spirit toward all concerned.

If the physician, as a result of his examination, decides that the patient is insane, or is in that borderland where it is difficult to decide between perversity and idiosyncrasy on the one hand, and insanity on the other, he must consider the judgment of the profession in favor of institutional rather

than family treatment, as obligatory upon him. He may then call for consultation with a psychiatrist or alienist. This he should do under all circumstances and he must do so if the family request it. Having now the opinion of the general practitioner and the specialist, that the patient is insane or threatened with insanity, the family will at once ask, what can be done?

Unfortunately, our knowledge of insanity to-day is very similar to our knowledge of the infectious diseases a hundred years ago. In those days malaria, yellow fever, smallpox, erysipelas, diphtheria, tubercu-losis and syphilis, that are so thoroughly understood to-day, were as mysterious as paranoia and dementia precox are to-day. The only insanity that we know anything about is general paresis. This disease we can diagnose, pronounce the unfavorable prognosis, predict the course, and assign the end. We have no cure for it, but it can be prevented by preventing syphilis, by properly curing it, and by regulating the life of the person who has had syphilis. In all the other insanities we have no pathology, we know no cause, and we are greatly restricted in our methods of treatment. Nevertheless, one thing has been firmly established, and that is that in the onset of any of the insanities, immediate hospital treatment should be instituted. This is the dictum of present experience, and present professional opinion.

We have previously noted that the detention of a patient against his will in an institution or hospital, before commitment, is a punishable offense. The law does not protect the physician in protecting the uncommitted insane person from doing himself great injury or doing himself to death. The hospital authorities who detain a patient are subject to severe fines and punishments. Therefore, commitment is necessary. In the City of Chicago, in the State of Illinois, commitment can be made only upon the complaint of a member of the family, a neighbor, or other interested person, to the county court, the service of a legal paper upon the insane patient, his trial after ten days by a jury in open court, and a verdict by that jury that he is non compos mentis. Then he is committed to such institution as the friends elect, or the court directs. Throughout the rest of the State, however, a patient may be committed by commission. Two physicians, at the direction of the county judge, examine the patient, and render a formal report of their opinions as to

his sanity. The judge acts upon their advice and the patient is committeed as before. In the City of Chicago, commitment requires at least ten days and usually these ten days are spent in the detention hospital. In the country, commitment can be made by commission in a few hours. Both methods are statutory.

Besides these two methods of commitment, patients may be voluntarily committed, but such patients can terminate their detention in the hospital by giving three days' notice, in writing, to the proper officials.

The Society for Mental Hygiene has recently published the abstracts of the laws of the several states relative to commitment. The price is one dollar. Address the Secretary, 50 Union Square, New York, N. Y.

In most of the states, and in England, commitment by commission is the rule, and from such commitment the patient may appeal to the court for trial by jury. Only the paranoiac is in a condition to appeal.

Since we advise the immediate removal of the insane patient, or the patient suspected of insanity to a state hospital for the insane, it is necessary to secure prompt commitment. The ten days of legal travesty necessary to secure the commitment of an insane person in Cook County may be avoided, and the patient may be relieved of the material danger of such a deday, by voluntary commitment, providing this can be accomplished. If it is necessary afterwards to get a legal commitment, the process in the country district where the institutions for the insane are located, is generally by commission.

During the commitment the utmost confidence should be shown the patient, and he should be told the truth about his condition by each and every one of his friends and his medical attendants—the whole truth and nothing but the truth. He should be told where he is going and when his friends will come and see him; otherwise the confidence which must exist between the hospital staff and the new patient will be delayed, and cure retarded.

The committed patient is generally taken to the hospital by a deputy sheriff. This is a barbarous practice. He must present the patient and a legal document at the hospital. Sometimes the deputy, on arriving at the hospital, is so drunk that it is difficult to tell which needs hospital treatment most, and cases have actually occurred in which

the deputy sheriff was left in a saloon on the way and the patient went on to the hospital alone. Some friend should go with the patient to prevent this barbarism, and stay for a day or two, in order to give the necessary history of the patient at the hospital. It would be well if the family physician could displace the sheriff in this important journey.

The cost to the patient of commitment by jury in Cook County is theoretically nothing, but the judge generally assesses the friends of the insane who are able to pay, from ten to twenty-five dollars for transportation to the state institutions.

Commitment by commission is a little more expensive. The two physicians, who are the commissioners appointed by the court, are entitled to a fee of five dollars each, payable in advance.

The costs of maintenance of the patient in the state hospitals are now charged against the patient's estate, or his family. It is about \$150.00 to \$200.00 per year. The family should furnish clothes.

In the state institutions it frequently happens that the interests of the patient to-

ward recovery are advanced by the employment of a private trained nurse. This costs about forty dollars a month. Superintendents are always willing to employ such nurses at the expense of the patient when in his judgment it is desirable. It often happens, unfortunately, that thoroughly trained and reliable nurses cannot be secured, especially since the introduction of civil service in the state institutions.

There is an unreasonable, but deepseated prejudice against the state hospitals. This is largely due to the legal aspects of commitment, to the employment of sheriffs, to the ignorance of the friends of the insane in interpreting the rules of the institutions, and to the absolutely unfounded attacks made by the press upon the management of the institutions, instigated in the past by their subservience to party politics. It is believed that the present position of the institutions under the Board of Administration will in the future obviate these attacks and forestall the newspaper reports of the accidents which are boung to occur in a population of fifteen thousand insane people in the custody of the state.

108 North State Street.

WHAT MRS. HANLEY HAD TO PUT UP WITH WHEN THE TRAINED **NURSE CAME**

"Yes, we had a trained nurse for pa," admitted Mrs. Hanley with a little sniff. "Doctor Yerkes thought from the first that I wasn't able to take care of him, but I held out until he was just real stern, and asked me if I wanted to lose my husband. Then, for the looks of the thing I gave up. It's a pity a woman can't take care of her own husband these days, especially a woman that's had the training in sickness that I've had, but you know how it is. If I'd breathe a word of this where Mary Jenkins would get hold of it, she'd say I begrudged the money that pa was using in his sickness. You musn't tell a word I say but it's just awful to have a trained nurse in the house."

"Why, what does she do?" asked sympathetic Mrs. Burke in a guarded tone.

"I could easier tell what she don't do," "The very first said Mrs. Hanley grimly. thing she did when she got here was to put on the tea-kettle and boil the water for him to drink. Did you ever hear of the like? When I wanted to know why she did that, she said, as pleasant as a basket of chips, that the water was impure. Will you think of that? The well John's grandfather dug when he took up the farm from the government! And the next thing was to give him a bath! That was the most high-handed proceeding I ever heard of, but the doctor stood right by her, so what could I do? I gave them both a piece of my mind when I got them where pa couldn't hear, but the young woman just patted my shoulder and said times had changed."

"What did Mr. Hanley say?" questioned the neighbor.

"Oh, he was too weak to say anything. He just fell asleep as soon as she got through fussing over him, and didn't wake for a couple of hours. I feel certain that she gave him a dose of some kind to put him to sleep, but he declares not. She's got him so under her thumb that everything she says is law and gospel. I told him yesterday that if that girl would say the moon was made of green cheese, he'd believe it."

"Well, maybe, she's doing just the right thing?" said Mrs. Burke. "You know it's wonderful the way they educate them in hospitals nowadays."

"Educate them! Is that what you think? I thought that, too, till Miss Gilbert came. If you'll believe me that girl uses hot stove lids and hot plates and hot salt bags just as I've done for years and years. I supposed she'd know all the up-to-date things about nursing, and have a whole kit of things to work with, but she hasn't. The other day pa felt kind of down and low-spirited, and I was going to give him a dose of Smithers' bitters, but she fairly took the spoon out of my hand, and what do you think she used? Why, nothing in the world but a cup of hot milk. And pa, the great goose, if I must say it, declared it did him more good than the bitters. Men folks are the most provoking creatures in the world."

"Hot milk? For a sick person. You surely must be mistaken."

"No, I'm not. She just sticks to the simplest things you ever heard of. I 'lowed she'd be wanting all the high-falutin' things from the city, but she uses grape juice and milk and eggs and chicken broth and just the commonest things you ever heard of. There was pa coaxing for mince pie and fried fish before she got here, and now he's as meek as a lamb. I've argued with him by the hour trying to get his mind off the things he couldn't have, but when Miss Gilbert says no, he never answers back. Sometimes I think he must be out of his head, but he won't have it that way. He's had enough to turn his brain, if he's flighty, for the way she manages things almost distracts me. She will have a window open night and day in spite of all I can do. I told her the other day that I had taken care of sick folks before she was born, and often we had to hang quilts over the windows to keep out the air, but she only smiled and said, 'It is possible?' in that everlasting polite way she You can't make her mad no matter how hard you try. She always has a smile and a nice word for you, till in the end you feel rather ashamed to be mean to her.'

"Why don't you just let her have her own way, since Mr. Hanley is getting along so well? She'll soon be gone and then you can do as you please."

"That's easy to say, Mandy Burke, but

not so easy to do. The other day she refused to let pa's nephew and his wife and children go in to see him, and I told her I thought she was carrying things a little too far. She said the bedroom was not large and pa needed all the fresh air in it. And besides the doctor said he should not have any company. Of course the doctor meant strangers, but she wouldn't hear to reason. James and Bessie were real provoked and wouldn't stay only the afternoon, though I tried to explain. And that wasn't the worst of it, either. The children got rather noisy, as children will, and Miss Gilbert came out and asked them to keep the little folks quiet. Oh, she did it with that smile of hers, but you could see she was mad. It's enough to provoke a saint to be told what to do in your own house. Of course pa stood by her, and said he was glad when the children were out of the house because they made his head ache, and the doctor lectured me about it."

"Well, I must be going home, Mrs. Hanley. I do hope you will soon be able to look after Mr. Hanley yourself, so keep well and content. I would not worry about anything if he was getting along all right, and the doctor told Charley he is. Just put up with her whims a little longer and then you will be rid of her."

"I guess you wouldn't say that if she was in your house," said the hostess applying her handkerchief to her eyes. "If some stranger would come into your house and take down the hair wreath your own mother had made and some everlasting flowers you had had in a vase in your bedroom so long as you couldn't remember when you put them there, and insist on having blankets instead of comforters, and insinuate that you talked too much to your own husband, and said that the water wasn't fit to drink, and swept your best carpet with a damp broom, and scalded off the dishes as if pa was poison, and all the other things I've put up with since that nurse came, then you would talk about being content. I don't wish anybody any bad luck, but if you ever do have a nurse in the house, Mandy Burke, you'll see how it goes. She's always talking about sterilizing and keeping things clean, but I told her the dust she raised taking the ornaments off the bedroom wall and letting the draught keep the dust in motion, didn't argue that she knew much about cleanliness. Well, come back when you can. Good bye! Yes, I'll be over as soon as I get a chance! Good bye!"—The Advance.

NURSING AFFAIRS, PAST AND PRESENT, IN CANADA.

Our readers will be interested in this chatty resumé based on Vol. IV of "A History of Nursing," and printed in "The British Journal of Nursing."

"In the earliest days of her history, and throughout the French régime (1535-1759) Canada was indebted wholly to the religious orders which came out of France for the establishment of hospitals, and the care of the sick in their homes."

"Throughout the ravages of the Indians the constant warfare between French and British, and the many epidemics and plagues to which Canada fell heir, these hospitals sheltered and cared for the wounded and sick. Later, when in 1775 the Americans invaded Canada they figured as military

hospitals and barracks.....

"With the settlement by the British, hospitals were established under civil or military control, in the more thickly populated districts, at shipping ports and in towns along the waterways. Gradually the hospital idea grew until now there are found hospitals from coast to coast, not only in the cities and towns, but throughout the country and sparsely populated districts."

Of the work of Miss Norah Livingston at the Montreal General Hospital, and of Miss M. A. Snively at the Toronto General Hospital we read that the history of their work "is the history of nursing in Canada. Their graduates have gone forth from their hands into every corner of the Dominion, building, developing, reforming, carrying the traditions and atmosphere of the schools in which they were trained. To Miss Livingston is due not only the efficiency of the nursing department of the Montreal General, but the high tone and standard of nursing to-day in many parts of Canada. Miss Snively, strongly social by nature, has been foremost always in public movements, in nursing organizations, in the superintendents' conventions, in committee work, and in educational propaganda. Hers is the credit of having led Canadian nurses in national and international relations, and of having cherished the international spirit. She rightly regarded the national associations of Canadian nurses, and their affiliation with those of other countries, as the crowning work of her nursing career."

An interesting review is given of the principal hospitals of the Dominion, the most important in the West being the Winnipeg General. "In 1871, after the collapse of the

rebellion, the little colony of Fort Garry enjoyed a considerable boom, and many volunteers who had come up from the East beat their swords into ploughshares and remained as colonists. Other immigrants came in over the Dawson route, or by river and cart from St. Paul. Houses were few and overcrowded, and, when sickness broke out, conditions were such as to render immediate action necessary. A meeting was called, a board of health formed, and steps taken to begin hospital work immediately. A one-story frame house was the best place that could be secured, and thus became the first general hospital at Winnipeg. It was not destined to become a settled institution without its full share of the vicissitudes of the pioneer. The present location reached in 1883 was the eighth occupied."

The children's hospital at Toronto, which owes much to the liberality and devotion of its president, Mr. J. Ross Robertson, is "one of the most perfect of its kind in the

world.

In addition to the voluntary hospitals there is a system of marine hospitals maintained by the Federal Government including all seaports. The Government also maintains hospitals in connections with im-

migration and Indians.

In connection both with the militia and the army a certain number of nursing sisters are appointed; anti-tuberculosis work is carried on amongst both Indians and immigrants; district nursing is organized through the Victorian Order of Nurses; school nursing is at present carried out under voluntary, not State authority.

Concerning education and organization, lack of uniformity in all respects is reported. We read that "In almost every Canadian city are to be found private hospitals corresponding to the 'nursing homes' in Great Britain. They are the private property of physicians, nurses, or stock companies. They are sometimes supervised by competent superintendents and nursed by graduates, but too often by young women, who vainly imagine that they are receiving an equivalent in professional education for their time and energies. These inadequate small schools and correspondence schools, together with the unrestricted influx into the Canadian West of disqualified nurses and midwives from the United States and Great Britain, are an increasing menace, not only to the nursing sisterhood, but to Canadian society at large, a menace which can be checked only by the passage of a uniform registration bill in each province."

The Canadian Society of Superintendents of Training Schools for Nurses was established in 1907 largely through the efforts of Miss Snively, who became its first president. She immediately threw all her energies and prestige into the work of bringing a national society for nurses into being, and in 1908 this society was formed and the well merited honor of the president's place was offered to her, and "under her leadership Canada entered into the international group in London, 1909, at one of the most picturesque and stirring functions in which nurses have ever taken part."

The Canadian Nurse, of which Miss Bella Crosby is now editor, with an editorial board representing every province and nurses association in the Dominion, "has a future of importance before it, in welding the nurses of the broad provinces into one united body."

Newfoundland is an "independent little British colony, conservative and cherishing its individuality, which has given the profession of nursing some of its best mem-

QUALIFICATIONS FOR PUBLIC HEALTH NURSES IN NEW YORK STATE

THE New Public Health Council, organized under the Laws of 1913, issues the following statement:

In regard to the public health nurses, the law provides that:

The Commissioner of Health, whenever he may deem it expedient so to do, may employ such number of public health nurses as he may deem wise within the limits of his appropriation, and may assign them from time to time to such sanitary districts and in such manner as in his judgment will best aid in the control of contagious and infectious dis-

eases and in the promotion of public health.

For supervising public health nurses the
Public Health Council has established the fol-

lowing qualifications:

They shall be registered nurses;

- They shall submit evidence, satisfactory to the Public Health Council, of training and experience of not less than two years after graduation, in one or more of the following lines of work: a, maternity work; b, infant welfare work; c, social service; d, tuberculosis work; e, care of communicable diseases, and f, school nursing.
- 3. They shall be, when appointed, not less than twenty-five years of age.

For public health nurses (other than supervising nurses) it is provided that:

They shall be registered nurses twenty-one years of age at the time of their appoint-

Questions and Answers.

The following answers are not "official." They are prepared for the editor.

University of the State of New York, 21st Nurses Examination

GENITO-URINARY NURSING

For Male Nurses

Wednesday, January 28, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. Define (a) hypospadias, (b) epispadias.

(a) Congenital opening of the urethra on the under side of the penis or into the vagina. (b) Congenital opening of the urethra on the dorsum of the penis.

2. How would you prepare a patient for removal of vesical calculus?

Ans. Give mild diuretics a day or so before operation, to flush the bladder. Secure a good evacuation of the bowels also. Shave the hair from pubes and perineum and cleanse the skin of these regions, the abdomen, buttocks and thighs with soap and water, followed by mild antiseptic applications several hours before operation. Cleanse the genitals thoroughly.

3. What could a nurse do to relieve the pain of a prolapsed anus?

Ans. Anoint the surface with oil or

Digitized by Google

vaseline and apply compresses wrung from ice water. If this is not tolerated, hot, moist compresses may give relief.

4. What is the lithotomy position?

Ans. The Dorso-sacral postion: patient on the back, with legs flexed on the thighs, and thighs flexed on the belly and abducted.

5. What is incontinence of urine?

Ans. Inability to restrain the discharge of urine.

6. Give some results of carelessness in

catheterizing.

Ans. Infection of urethra or bladder. Withdrawal of too much urine at one time. Wounding of urethra or bladder. False passage. Wetting of patient's clothing. Shock.

7. What are the symptoms of cystitis?

Ans. Frequent urination with tenesmus; pain and tenderness around the bladder; fever; urine scanty, high colored and containing mucus, blood, pus, amorphous and triple phosphates.

8. What preparation should the nurse make for the doctor in a case of urethral

stricture?

Ans. Cleanse glands and meatus with soap and water followed by bichlorid of mercury solution 1 to 5,000. Irrigate the urethra with saturated solution of boric acid or other appropriate antiseptic. Irrigate bladder with same solution, if practicable.

9. Describe irrigation of the bladder.

Ans. The operator's hands must be prepared as for an operation, and all instruments and utensils must be surgically clean. The patient lies in the dorsal position, the bladder is emptied before the irrigation, and the genitals are washed with soap and water, followed by an antiseptic wash. The meatus is cleansed and the urethra irrigated as described above. A well lubricated catheter is carefully inserted into the bladder and the residual urine withdrawn. A glass funnel attached to four feet of rubber tubing is filled with the irrigating solution at a temperature of 100° to 105° Fahr., and

when the air and cold fluid have escaped the tubing is connected with the catheter, the funnel is raised two or three feet, and the solution passed slowly into the bladder until it is distended. When distention becomes uncomfortable the flow of the solution is stopped; after a few moments the funnel is lowered so as to siphon the fluid from the bladder. The funnel is then refilled with solution, and the bladder filled again. This process is repeated until the outflow from the bladder is clear. With a double-flow catheter the process is similar, except that the distention of the bladder is controlled by compression of the outflow

10. What is genito-urinary surgery and what organs are considered in this branch

of surgery?

Ans. Surgery of the genital and urinary organs. Kidneys, ureters, bladder, prostate, urethra and all the organs of generation.

11. Why does not the urine return to the kidneys when the bladder is much dis-

tended?

Ans. Because the mouths of the ureters are guarded by valves formed of the lining membrane of the bladder and preventing reverse flow of the urine.

12. How are the various kinds of cathet-

ers sterilized?

Ans. Metal, rubber, glass and gum elastic are boiled in water five minutes or more. Others are sterilized by formaldehyde vapor or a solution of carbolic acid 1 to 20, and rinsed in sterile water.

13. What is the minimum period of in-

cubation of syphilis?

Ans. Three days has been reported, but on doubtful authority. Ten days is a more probable minimum period.

14. What is the maximum period of in-

cubation of syphilis?

Ans. Six months.

15. What is the average period of incubation of syphilis?

Ans. Fourteen to twenty-one days.

MATERIA MEDICA.

Wednesday, January 28, 1914-9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. Define (a) decoctions, (b) infusions,

(c) tonics, (d) syrups.

Ans. (a) Liquid preparations made by boiling vegetable substances in water—usually of 5% strength. (b) Weak liquid preparations for internal administration, made by treating a drug with hot or cold water, and usually of 5% strength. (c) Drugs or



other agents used to increase vital activity or "tone." (d) Concentrated solutions of sugar in water, medicated with one or more drugs and intended for internal administration.

2. What is the ordinary dose of croton oil and how should it be administered?

Ans. One drop, placed on the tongue with 5 or more drops of sweet oil; or it may be given in emulsion or pill.

3. If a strength of m v represents gr. 1/150, how many minims will be required to make a dose of gr. 1/60?

Ans. 121/2.

4. What is the dose of syrup of ipecac for an infant?

Ans. Two to five drops as an expectorant; ½ to one drachm as an emetic.

5. How many drams are there in 2/3 of a pint?

Ans. Eighty-five and one-third (85 1/3).

6. What in fluid measure is allowed as the equivalent of the liter?

Ans. One quart.

7. Express in full (a) b. i. d., (b) q. h., (c) a, c.

Ans. (a) Bis in die, or twice a day. (b) Quaequae hora, or every hour. (c) Ante cibos, or before meals.

8. Mention (a) one hypnotic, (b) one stomachic, (c) one purgative. State the usual dose of each.

Ans. (a) Chloral. (b) Gentian. (c) Castor oil. Dose: (a) Gr. 7%. (b) Gr. 15. (c) Drachms 4.

9. In giving drugs to produce sleep, men-

tion three conditions that should be secured in order to make them effective.

Ans. The patient should lie down, should be comfortably warm and the room should be quiet and not too light.

10. How much mustard to a teacup of water should be used in order to produce emesis? If necessary to repeat the dose, how often and how many times should it be repeated?

Ans. One tablespoonful. Two more doses may be given, usually at fifteen min-

ute intervals.

11. Mention a drug having a cumulative action.

Ans. Digitalis.

12. Mention one medicine that should always be given through a glass tube.

Ans. Tincture of the chlorid of iron.

13. What are the toxic symptoms of hydrated chloral?

Ans. Prostration, dilated pupils, slow pulse, becoming weak and rapid, slow respiration, subnormal temperature, coma.

14. Define (a) antiperiodics, (b) car-

minatives, (c) anesthetics.

Ans. (a) Drugs or remedies employed for prevention or cure of malarial poisoning, because of their tendency to break up the periodicity of the attacks. (b) Remedies given to expel gas from the alimentary tract, by increasing peristalsis. (c) Drugs used to produce loss of sensation, either local or general.

15. Mention (a) a drug that will produce dilation of the pupil, (b) a drug that will

produce contraction of the pupil.

Ans. (a) Atropin. (b) Eserin.

BACTERIOLOGY AND SURGERY

University of the State of New York, 21st Nurses Examination.

Thursday, January 29, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

- 1. Why is it necessary to repeat, at least once, the process of sterilization of normal salt solution?
 - 2. Define immunity.
- 3. Mention two means by which immunity may be acquired.

- 4. What is the most important measure used for controlling the infection of milk?
 - 5. Define healing by first intention.
- 6. What preparation of the field is necessary in the application of plaster bandages?
- 7. Describe a course of precedure if secondary hemorrhage should follow the removal of tonsils.
 - 8. Mention four classes of wounds.
- 9. To what is discoloration of the tissues following an injury due?

- 10. Define (a) septicemia, (b) pyemia.
- 11. Briefly describe the essentials in the nursing care of a patient who has undergone the operation of tracheotomy.
- 12. How may the green of adhesive plaster be removed from the skin.
- 13. Name *three* of the most important points to be observed in the care of surgical instruments after operations.

14. What care must be taken when making solutions of carbolic acid? Why?

15. Why does alcohol not disinfect if used stronger than 70%?

DIETETICS

Thursday, January 29, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

- 1. To what classes do the following foods belong: (a) beef, (b) potatoes, (c) eggs, (d) lettuce, (e) butter?
- 2. What digestive juices are involved in the digestion of each of the above foods?
- 3. Name three kinds of food that should in general be eliminated from the diet of the sick.
- 4. What is the difference between cocoa and chocolate?
- 5. Why is human milk more easily digested than cow's milk?
- 6. Give the relative per cent. of fat and proteid in 7% top milk.
 - 7. Give menus for three meals, with a

special view to increasing bodily weight in a person who is otherwise healthy.

- 8. What is the chief dietary value of fruits?
 - 9. Of what food value are salads?
- 10. What foods do you eliminate in cases of diabetes? in cases of nephritis?
- 11. How would you cook rice for an invalid?
 - 12. Give your method of baking apples.
- 13. Mention three ways of cooking eggs, suitable for a patient on a soft diet.
- 14. What kinds of food would you give in cases of rachitis?
- 15. What diet in general would you follow in nursing patients with nervous disorders?

Have your answers to these questions ready for comparison with the answers to be given in a later number of the GAZETTE.

INFLUENCE OF HEREDITY.

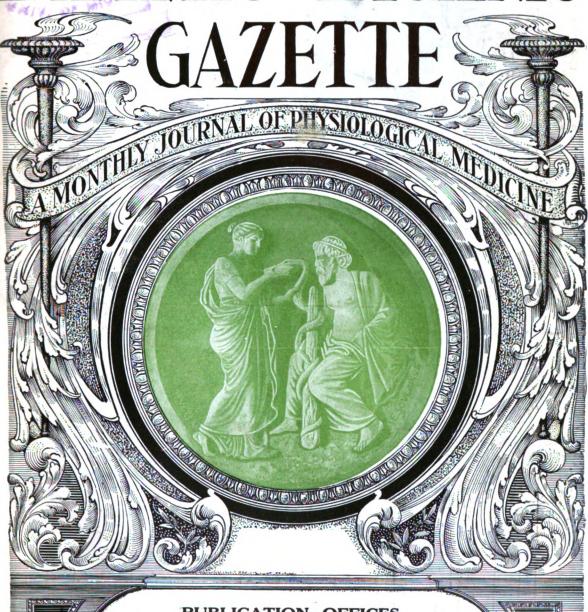
"That's a fine baby of yours, Bill," said the boss to his chauffeur.

"Yes, Mr. Wilkins," said the chauffeur. "My wife and I are pretty proud of him. He's the latest model, all right—a self-starter, with an automatic horn that would wake the dead."—Hospital Topics.

What I must do is all that concerns me, not what the people think. This rule, equally arduous in actual and in intellectual life, may serve for the whole distinction between greatness and meanness. It is the harder because you will always find those who think they know what is your duty better than you know it. It is easy in the world to live after the world's opinion; it is easy in solitude to live after your own; but the great man is he who in the midst of the crowd keeps with perfect sweetness the independence of solitude.—Emerson.

OUTDOOR TREATMENT OF PUERPERAL IN-FECTION.—For the past five years outdoor treatment of puerperal infection has been the routine in the Boston City Hospital. This E. B. Young and J. T. Williams (Boston Med. Surg. Jour.) report as having reduced the mortality from 44.6 per cent. to 24 per cent. They say that this treatment probably exerts its action chiefly by increasing the amount of hæmoglobin in the blood. Sunlight is probably quite as important as fresh air. Curettage is contraindicated in puerperal infection, because it increases the mortality nearly 10 per cent. A single intrauterine douche of sterile salt solution should be the only local treatment, and some writers deny the value of even this. Antistreptococcic serum and vaccines have not proven of much value. door treatment is the most effective known at present for puerperal infections.—Canadian Practitioner and Review.

THE DIETETICAND HYGIENIC



PUBLICATION OFFICES

87 Nassau St.

New York

\$1.00 Per Annum. 15c. Per Copy.

Entered as Second-Class Matter at the New York Post Office.

MANATURAL CONTROL OF THE CONTROL OF

The best antiseptic for purposes of persunal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teet!..

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts water; it also forms a useful application in simple disorders of the skin.

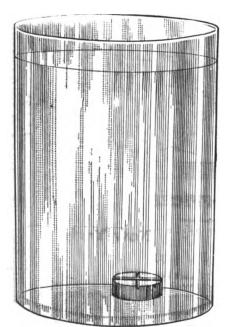
In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY LOCUST AND TWENTY-FIRST STREETS = = ST. LOUIS, MO.

PTOMAINE POISON



Where the patient is suffering agony from ptomaine poisoning as a result of tainted food, place

ONE TABLET OF CHINOSOL

in one tumbler warm water.

Let the patient drink entire tumblerful.

It has many times been shown that this procedure counteracts the influence of the ptomaines and brings relief most promptly. Many patients now dead, might have been saved had physicians all known this valuable truth.

CHINOSOL CO.

PARMELE PHARMACAL CO SELLING AGT.,

Digitized by Google

LES AND CUMICAL

THE

DETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A. M., M. D.

Vol. XXX.

OCTOBER, 1914

No. X

EDITORIALS.

CONSUMPTION AND CIVILIZATION.

THE tubercle bacillus is an index by inversion of the real progress of the race. By it the claim of civilization to dominate human life may fairly be judged. Tuberculosis will decrease with the substantial advance of civilization, and this disease will as surely increase as civilization retrogrades. Is this statement much too broad? Is it untenable? Consider, then:

There is no phase of life which tuberculosis does not touch—nay, upon which it does not press with a most grievous, heavy hand. It claims, between infancy and old age, every seventh, and between adolescence and maturity every third or fourth, life —in some of our communities every other life. Every other adult negro succumbs to it.

Society's "submerged strata," which cannot free themselves from the grip of pestilent environment—the darkness, wretchedness, and starvation upon which the saprophytic bacillus propagates its teeming billions—yield victims far in excess of those claimed by all other infections put together.

Nor are the rich, in fancied security, any freer from the danger than were the gallants and the gentle ladies in Poe's dreadful tale, who thought by isolating themselves to escape the Black Death. For the beautiful laces and garments worn by the well-to-do and the pretty things worn by their children, and often got at remarkably low prices (for is he not a fool who does

not buy a thing as cheaply as he can?) are like as not worked at and bent over and coughed upon from dawn until midnight by sweat-shop consumptives. Thus much oftener than we imagine does the poverty of Lazarus make itself felt in the house of Dives.

There is scarcely a trade, or occupation, or business, or calling which does not, in varying degree, give up its quota of valuable lives. And the factory is even more productive of tuberculosis than the home for the consumptive workman, under conditions which have up to recently prevailed, has infected his fellow-workmen more than he has the members of his own family.

In literature and the arts how many precious lives have succumbed to this veritable captain of the men of death. Consumption has ever been "death's direct door to most hard students, divines, physicians, philosophers, deep lovers, zealots in religion." Who can estimate the loss in beauty, poesy, in intellectual treasures, and in all the sweetnesses and refinements of life, which this disease has inflicted upon us? How many an inspired genius, even before his powers have matured, has suffered its most untimely visitation!

The proverb goes, "Trokner Husten-Toder Trompeter"; nor has the sword ever been nearly as voracious of human life as has been the tubercle bacillus. And such scourges as cholera, the plague, small-pox, although they have been more gruesomely

picturesque in their ravages, have never been in the running with consumption.

An intensely practical spirit has come to be representative of our present-day civilization, and of this we are exceedingly vain. In the popular phrase, everything is centred in the question "Does it pay?" and whatever fails to come up to the price of money standard is eschewed contemptuously. To understand adequately this tendency one has but to contemplate, for so long as he can endure to look upon it, the characterization of Mammon which Mr. Watts has painted. It is, then, nothing short of astounding—the economic losses which we permit tuberculosis to inflict upon us; astounding how our shrewdness, our business prescience, has in truth a vision reaching no farther than the essentially obtuse angle the apex of which is the end Tuberculosis is a disease enof its nose. tirely preventable—and by means extraordinarily simple, and of comparatively little cost. Yet, to state a single fact, it is costing the United States an annual loss exceeding a billion of dollars.

Thus, then, does this disease affect most intimately every relation in life, every aspect of civilization—the infant subsisting on impure milk; the child studying in unhygienic schools; the adolescent contending with the conditions peculiar to those years; young

men and young women aspiring to matrimony; the mother, in whom lies the destinies of the race; the man who should be sturdily accomplishing the world's work. Tuberculosis is pervasively concerned with our habits and customs, with our housing conditions, the sanitation of our cities, the regulation of child labor, and innumerable other details of existence. It has to do fundamentally with human evolution; with human heredity and preservation, humankind's course in the present life, its generations to come. It provides a subject much more worthy wise and sane legislative consideration "than all the many questions that make and unmake ministries." From whatsoever viewpoint one views this allpermeating matter, one must conclude that tuberculosis is indeed the executioner-inchief fulfilling the natural law of the survival of the fittest.

Three papers on this supremely important subject of tuberculosis appear in the present issue of The GAZETTE, by Dr. Mary E. Lapham, by the Editor of The GAZETTE and by Doctor Arthur C. Jacobson. And our fourth paper is concerning a disease very nearly related to tuberculosis and which, with tuberculosis makes half the human death rate—that is, pneumonia. The reader, we are confident, will find none of this matter banal.

FEMININE POSTURE.

DR. MATHILDA K. WALLING, in a meeting of the Woman's Medical Society of New York State, defined two classes of bad posture: the congenital, which it takes years of careful study to overcome, and the acquired, which is not so difficult to remedy.

Correct posture is that in which, standing or sitting, correct muscular balance is maintained; thus is right heart and lung action assured. School children should be taught the great importance of standing well. Schools have been blamed for causing bad postures, because the children sit in seats not suited to them, leaning over desks without enough change of position and no exercise. In many cases the criticism is justified.

From the physician's viewpoint Dr. Walling approves the Montessori method of conducting a school; for by this system the children are allowed to move about and change their positions. But bad posture is usually the sign of muscular weakness and a child cannot be cured simply by being told to stand up straight. Regular courses of exercise are necessary. Clothing is a cause of poor standing and sitting posi-There is apt to be too much weight on the child's shoulders. His clothes drag him down. Shoes are another cause of incorrect postures. Physicians must became educators in these premises if many of the tendencies exhibited by the men and women of to-day are to be eradicated in the generation following them.

LEPRA AND LEPROSY.

DESPITE the great deal of disease-prevention literature which the medical profession has disseminated among the laity, in lectures, public health bulletins, popular articles and the like, there nevertheless remains a deplorable popular inability to discriminate between the various ways by which infections are contracted, and as to the relative virulence of infections. Measles, for example, is likely to be acquired by the briefest contact; whilst to become tuberculous there must be predisposition, and even then the contact with the infectious material must be intimate, frequent and prolonged implantation for an to take Again there are many infections, not particularly dreaded, which are much more virulent than leprosy, the fear of which latter disease we desire here to dwell on.

:

If the lepraphobia which from time to time occasions emotional epidemics among our people, epidemics in which the most occasionless cruelty is displayed against the unfortunate sufferers from that comparatively innocuous disease, if such lepraphobia could be converted into a wholesome and effective dread of the Great White Plague, for example, tuberculosis could be made as rare as smallpox. And if for lepraphobia we could read syphilophobia, how infinitely more worth while would be the potency in such a fear, properly directed against the Great Black Plague.

Bacteriologists generally agree that leprosy is way down in the infectivity grade. Though tuberculosis, as we have observed, is not easily communicable, leprosy is much less so. The infectiousness of the leprosy bacillus is of a low character. The bacillus lepra resembles that of tuberculosis in many respects, differing from it, however, in that it grows with difficulty on artificial media and is much less, if at all, pathogenic for the lower animals. "There can be little objection in a country such as ours, where leprosy shows slight tendency to spread, to give a clean leper his freedom. There is no more danger from a leprosy patient of clean

personal habits, who exercises care concerning the discharges from the lesions, than there is from a discharging case of tuberculosis of the glands of the neck." And probably not five per cent. of the tuberculous have such discharging glands.

One great reason for the irrational popular lepraphobia is that the modern disease is confounded with the biblical accounts of it. But in ancient and mediæval times the syphilides, the skin, bone, joint and gland lesions of tuberculosis, psoriasis and pretty much any persistent skin lesion were deemed leprous. In this relation, therefore, an excellent paper by Dr. H. W. Hill, is most informing. Hill considers that modern leprosy should never be thus called, but should be designated lepra. Such lepra shows its skin lesions in, not under the skin, enlarging slowly if at all, the enlargement in most cases being far too slow to notice in a week or even in two. Tsaraath, the biblical leprosy, showed its lesions under, not in the skin, if the lesion were in the skin, but failed to enlarge noticeably within a week or at most in two weeks, the suspect was released. The two diseases Hill therefore holds to be converse as regards these, the essential points of diagnosis of "The infectiousness and incurability of tsaraath, supposed to aid its identification with lepra, are nowhere mentioned or implied in the Hebrew accounts. This ancient belief in the identity of the two diseases has undoubtedly added much to the sufferings of the modern leper and should be dispelled as soon and as emphatically as possible. Every effort should be made to point out that lepra is produced by a well-known germ, belonging to the tuberculosis group; and is in its clinical effect a second cousin, so to speak, to tuberculosis, but much less infectious—a disease to be supervised and prevented from spreading, of course, but calling for no panic stricken flights from its neighborhood and no especial hardships or cruelty to its unfortunate victims."

THE HELPFUL UNFIT.

ONE of the newest and most propitious experiments making for the solution of the problem of industrial waste is the chance afforded feeble or partially disabled or convalescent people in hospitals and asylum workshops to support themselves by doing useful work. Both in this country and abroad there have been successful attempts to find work for people unable under the present system of production to gain all they need for a The prospect is promising that knowledge will be gained which will mean changes in charity methods sufficient to encourage self-reliance and efficiency in many disheartened workers.

Thus far such experiments have proved the decided money value of such work, done despite obstacles. Supplies worth \$40,000 were produced the summer past by men patients on the hospital farm at the State colony at Gardner, Mass. A pottery established within two years in connection with a hospital on the Pacific Coast has enabled tuberculous girls to pay their expenses under sanatorium treatment and to learn a self-supporting trade. The men admitted to the Otisville Sanatorium of the New York City Health Department are required to do such work in and about the institution as they are fitted for, and as is salutary for them; and they are much the better off thus occupied. This is much better than twiddling and thumbs abusing establishment. Five patients in an Eastern hospital last year made and sold \$6,000 worth of pottery. At the Bedford Sanatorium for Consumptives of the Montefiore Home in New York vegetable gardening is done by the patients sufficient at least for the needs of that superb institution. Feeble minded patients under Dr. Fernald and Dr. Tuttle at the schools and hospitals at Waverley, Mass., under Dr. Laehr at the Hans Schoenow Hospital in Berlin, Germany, and in other places where crafts work has been instituted, have made an excellent showing. At Saranac Lake the patients do superb work in photography and the like.

Such workers are not expected to be trained in this way for success in the more skilled trades, but certainly they can be taught the more simple arts of metal-working, hand-weaving, carving, leather-working, pottery-making and cement-working. Men and women thrown out of employment in a particular trade because of some special unfitness are by no means of no service. The unfeeling should have no right speaking of them as human derelicts or undesirables or fit only for the scrap heap. The problem is to find and organize the sick or discarded workers, teach them work that they can do and so by grading work to their ability restore to them their selfrespect and their sense of having a recognized place in society. Those who have been studying the experiments under way are predicting a system of labor supplementary to the present system of regular industries which involves so much waste. The burden of supporting the sick and idle will become too heavy, they assert; and then will be devised some general social policy of training the imperfectly fitted people, now often allowed to throw away their lives in sadness and neglect, to use what productive power they have for themselves and the community in which they live.

Whoever supposes that the power of imagination is merely a mental emotion, which may to any extent, without corresponding changes in the physical functions, labors under a mighty mistake. Suggestions by others of the ideas of health, vigor and hope are influential with many people

for restoring health and energy both of mind and body. Having then such an effective power to deal with the great desideratum has been to find the best means for regulating and controlling it, so as to render it subservient to our will for relieving and curing diseases.—James Braid.

OUR ALASKAN INDIANS.

Most of the natives of southeastern Alaska live near the pale faces—trade in the same stores, work in the same mines and canneries. The two races intermingle freely in public places, settling amicably their own race problem without help (or interference) from outsiders. The Indians are by nature very sociable, indulging freely in feasts, dances and other ceremonies, coming together for these occasions in hundreds from all sections.

All this has, however, the one disadvantage that it leads to the spread of "catching" diseases not only among their own people but also among the whites. These are consumption, measles, gripped, whooping cough, diphtheria and eye troubles. As all of these, except perhaps the eye diseases, were brought to Alaska originally by the Whites, they have been a heavy misfortune to the Indians; especially because any infection, when it visits a race or a people for the first time, is much more than ordinarily virulent among them.

Therefore our United States Public. Health Service makes it plain, in its reports, that unless proper medical and sanitary relief is extended to the Alaskan Red Man in the near future, the spread of the diseases of civilization among them will in time result in the extermination of that now much endangered race.

And the Bureau of Education in Alaska grasps fully this alarming situation and is working heroically to prevent the excessive mortality among those Indians. At present its resources are necessarily limited and inadequate to the demands made upon it; this is a fact which should appeal to the American People, who ought to feel a great and a natural responsibility in the matter.

A part of the appropriation for the education of Alaskan natives is being used for the maintenance of three improvised hospitals in schoolhouses and for salaries of teachers and nurses. Lectures are given on various diseases and on sanitation; and bulletins are distributed for the guidance of field workers.

A PEACE PRAYER.

O God, who hast made of one blood all nations of men to dwell on all the face of the earth, and Who, in Thy Holy Word, has taught us that One is Our Father, even God, and that all we are brethren;

We pray Thee in this dark hour of international strife that Thou wilt open the eyes of the people, and those who in Thy Name are entrusted with the authority of Governance, to see and understand their right and true relation to Thee, and through Thee to one another.

Teach them by Thy Spirit that hatred and violence are not strength, but weakness; that the true safeguarding of a nation is not to be found in weapons of war, but in those eternal principles which make for righteousness and truth and brother-hood and peace.

Give to those who shall suffer in the war which is raging now the consolations of Thy grace. Heal the sick; comfort the wounded; minister to the dying; and bind up the broken heart.

Bring, we pray Thee, to a speedy end this international strife; and hasten the time when peace shall flourish out of the earth, and all shall dwell together in unity and love, and war shall be no more. We ask it in the Name of Our Saviour Jesus Christ. Amen.

This prayer was authorized by Bishop David H. Greer to be made in Episcopalian Churches. Its essence will purely be appreciated by readers of all religions, of whatever denomination or of no denomination whatever. By reason of the present epic tragedies to which it is related, we beg leave to print it in a secular Journal.

MALARIA AND POLITICS.

Our Minister to Greece, appointed some months ago, after some little exercise of that office, suddenly, in June last, gave up his job, renounced the land that bestowed it on him, and faced all Eubehalf of Albania and her woes. It has been suggested that this singular behavior was largely by reason of a touch of the malaria which seven-tenths of the Grecian people are suffering and which permeated untowardly his puritanic, New England temperament. Here is an explanation not without plausibility; and which may account also for some recent utterances of an ever-strenuous statesman, who is now in addition disobeving a very wise doctor. The conduct of both these gentlemen, and possibly also of many others in American public life, who may be similarly afflicted, ought to be made allowances for in the kindly light of history. The conqueror of Greece many centuries ago was not so much the Roman or any other armed foe, as that great tyrant which even now holds half humankind in its enervating grip—malaria. The influence of this disease has undermined the mental stamina and the glorious virility not only of innumerable individuals but also of whole

ethnic entities. It is not recorded to have prevailed among the Greeks in their Homeric Age; nor when Sappho sung, and Pericles ruled and Phidias wrought; when Hellas bore the race the rest of mankind have since despaired of emulating. Any word indicating malaria seems to have appeared first in "The Wasps" of Artistophanes-several years previous to which play the Athenians had been fighting on the Island of Sphacteria, to-day, as then, one of the most malarious spots in the pestilent Then a new term had to be invented-melancholia-to indicate the mental effect of malarial fever, along with the black bile and the enlarged spleen. Next came the Eastern conquests of Alexander, for which dreadful old Mother India amply avenged herself. For with the return of the infected Greeks (including Alexander, who is historied to have died of it) began the epic physical and psychic degeneration of that once so magnificent people. Then (observes W. H. S. Jones, in his Malaria and Greek History, Manchester University Press) "did patriotism decay and lofty aspirations cease to stir the hearts of men; then did the erstwhile noble oratory in the areopagitica give place to puerile dissatisfactions and to ignoble querulousness."

The hypnotic condition and the phenomena associated therewith are purely subjective, and originate in the nervous system of the patient. The fixation of a brilliant object, so that the palpebral muscle becomes fatigued, and the concentration of the attention on a single idea (as of sleep) brings about the sleep. The subjects can even bring about this condition in themselves, by their own tension of mind, without being submitted to any influence from without. In this state the imagination becomes so lively that every idea spontaneously developed or suggested, by a person to whom the subject gives this peculiar attention and confidence, has the value of an actual representation to him.—Bernheim.

Hypnotic sleep has many helpful influences. It is really a change in the equilibrium of the brain and mental faculties and produces great modifications in the memory and in sensibility. Life is indeed a long series of habits to which we are accustomed; hypnotism changes these habits which in a normal condition we do not try to modify, and on awakening, all memory of the change is gone, though its effects may remain. Now oftentimes the nervous system becomes fixed in certain disagreeable or dangerous habits, and the upsetting of these, the uplifting of the mind from the rut, is of great service. In the sleep of hypnotic speech, action, methods of thought, all are changed, there is a cerebral rest and beneficial results often follow. -Pierre Janet.

ORIGINAL ARTICLES.

THE TUBERCULOSIS OF WELL PEOPLE.

BY DOCTOR MARY E. LAPHAM, HIGHLANDS CAMP SANATORIUM, HIGHLANDS, N. C.

I HAVE under my care to-day six men who up to the very moment of their final breakdown were well and working with undiminished capacity. They consulted their doctors for the relief of various symptoms-for a bad throat, malaria, indigestion, biliousness. When the true condition of the lungs was discovered these men could not believe that there was anything seriously wrong, and yet in each case the lungs were so extensively infiltrated that the question of recovery required careful consideration. When asked how long they had been sick, they replied, "Not at all." One man said, "I've never felt better in my life, and am just as able to do a day's work as I ever was," and to-day all of these six men persist in saying that they feel perfectly well.

These men were all living under very favorable circumstances. They were abundantly fed, not overworked, in easy financial circumstances, free from all vices, were in no way dissipated, and lived in a climate encouraging out-of-door life for the greater part of the year. These cases of tuberculosis of well people have played so prominent a part in my work for the last few vears that I have formed the habit of regarding tuberculosis patients as more largely derived from the ranks of well people than we have hitherto supposed. We are accustomed to regard the resistance of the individual as of equal importance with the virulence of the infection, but I see day after day people in the very best ranks of life and in apparently vigorous health and in the enjoyment of full working capacity come crashing down all at once with tuberculosis in a most advanced stage. My patients are not drawn from crowded tenement districts, none of them have suffered the privations of poverty, and life has offered them all opportunities and promises of success. They sometimes remind me strongly of certain streets in Vienna, where in cellars beneath the ground, with damp walls reeking with green mould, the conditions of life are so horrible that the very bones soften, but tuberculosis is not necessarily there. Above, in well furnished rooms, flooded with light and sunshine, children may be dying with tuberculosis, but below, in the unspeakable horrors, there is none. Why is this?

My experience has taught me that good health is no guarantee against tubercuiosis. On the contrary, it seems to offer a shelter behind which the enemies serenely carry on their work of destruction in perfect security and entirely unsuspected, because there is no manifestation of ill health to suggest their presence. In a way ill health may possibly be a protection against tuberculosis, because in searching for the reason for this ill health, a tuberculous process may be discovered before it is hopelessly advanced, while with perfectly good health, this process may advance and escape detection until it is too late.

If at the very start tuberculosis always produced some marked impairment of health, it would not be the dangerous disease that it is. It is because tuberculosis does not necessarily produce any immediate bad effect upon the health that it is so terribly dangerous. Death from tuberculosis in a large majority of cases is due to failure to discover the danger in time, because it is not looked for. Lack of manifestation means lack of detection, and delayed diagnoses mean death.

The medical profession is more or less helpless in these cases. We cannot go to a burly man and insist upon examining his lungs, nor can we say to the successful lawyer or business man, "Here, you seem perfectly well, but it is possible that you are

in great danger. Let me examine your lungs and see if you have any tuberculosis." They would think we were crazy, and so would the parents of robust children that come romping and tearing through the house in the full vigor of animal health. "What," the father would say, "examine my boy? Why, look at him. Isn't he the very picture of health?" How shall we convince these parents that it is precisely in the ranks of well children that the tuberculosis victims of ten, twenty or thirty years from to-day are being prepared? We may convince them that science has indisputably proven that all children are infected by tubercle bacilli by the time they reach maturity. They are quite willing to admit this as a general principle, and to be faintly interested in it as a scientific truth, but that this fact has anything to do with the health of the football player is beyond their comprehension. They cannot be made to understand that the seeds of danger are sown in every child and that no man can say in which of our children these seeds will develop.

We have two undoubted facts of the greatest importance to consider. every child is infected with tubercle bacilli; second, what is this infection doing? order to prevent tuberculosis, we must first of all be able to answer this question. the infection remains harmless, the child is safe. If it does not, then how shall we detect this beginning of disaster at the earliest possible moment? The answer seems perfectly plain, perfectly evident, and is so simple that it is hard to understand why it should not be immediately appreciated and carried out. The only way to discover tuberculosis in time is to look for it periodically, and to regularly satisfy ourselves that our children are in no danger from an infection inevitably acquired. Since we can in no way avoid this infection of our children, the best that we can do is to have them examined regularly by a competent specialist, so that we may detect the development of danger and arrest it. It is a sad paradox that the sickly child whose infection manifests its dangerous characteristics at an early age, so that it is detected and arrested, offers a better guarantee for freedom from tuberculosis in adult life than its healthy brother, who never gives any occasion for examination. Under the cover of good health, the robust boy goes on through school and college life, enters business,

marries and finally, when it is too late, the concealed story of all these years of unavailed opportunities for safety, becomes apparent.

A typical case, and one that happens every day, is that of a young man brought up in the midst of luxuries and in the enjoyment of perfect health. An athlete through all his school and college days, he was just making a brilliant success in the financial world, when one day under the strain of nervous excitement, he collapsed. The horrified physician found both lungs irretrievably injured, but, with little or no hope, the patient was rushed to the mountains and every effort made to induce recovery, but in vain. Suppose the parents of this boy had had him regularly examined by a competent specialist; suppose the disease had been discovered in time. This is the keynote of all our future tuberculosis work; regular examinations of all our children and youths in order to discover the very first beginnings of disaster. This examination cannot be made by the eye and ear alone, nor by the microscope, nor by an untrained mind. The beginnings may be characteristically opposed to the causation of altered breath sounds in the lungs, so that the threads of infiltration may weave their way throughout the lungs until their destruction is seriously threatened, without the ear being able to detect the existence of these dangerous processes. In these cases we must have an X-Ray examination. No reliance whatever can be placed upon a negative report of sputum examination, because tubercle bacilli may be absent from the sputum in very advanced cases, and because our knowledge of the tubercle bacillus is so woefully inadequate that we are unable to detect its presence except under one form of manifestation.

Before we can contemplate the elimination of tuberculosis we need to have more scientific knowledge concerning it. Our ignorance is as appalling and as universal as the extent of the infection. Before New York City spends another four million dollars on a hospital for a disease which it knows nothing about, an adequate endowment for scientific research should be made, in order that we may know what this disease is that is costing New York City alone over two million dollars a year. Why is it so different from all other diseases?

To-day our work is based on ignorance. We know that tubercle bacilli are often present in the sputum of tuberculosis vic-

tims, and all our work is based upon this single fact. We do not know whether or not tubercle bacilli can live outside of the human body. We do not even know the life history of tubercle bacilli, and yet the United States is spending over twenty million dollars a year combating an enemy of which it knows nothing. Every hospital, every sanatorium, every bed, all district nursing, all milk and eggs devoted to tuberculous victims are confessions of incompetency, of inability to prevent. The final stage of tuberculosis is being well managed. We are striving with might and main to induce recovery and to relieve the suffering of these patients, but we are making no precise effort to prevent the necessity for these ministrations. We are allowing our people to go on until they fall by the way, and then we spend every dollar that we can get to take care of them. The economical plan is to prevent the possibility of delayed diagnoses by regular examinations. maintenance of a high standard of resist-

ance, freedom from all unhygienic and debilitating factors, the living of a sane and moral life and the enjoyment of good health are all favorable influences against the development of this universal infection, but they are only favorable influences and they by no means guarantee against failure in adult life. Tuberculosis begins in childhood. We must prepare the safety of our coming adults by carefully examining our present children. While unhygienic, depressing factors favor the development of tuberculosis, their absence is no indication of safety. Our cry to-day is not so much for money, as for brains—as for someone to gather up the work now being done in European laboratories and to present it to us in such a way that we can comprehend its full significance. The day is coming when the taxpayer will need to be as sufficiently protected against tuberculosis as the victims themselves. The only way to prevent tuberculosis is to know something about it.

THE VALUE OF TREES TO CITIES.

THERE is a New York Tree Planting Association, and Dr. Stephen Smith is its president. Dr. Smith agrees with the poet Pope who extolled trees which "furnish in summer shade, in winter fire." More than that man's very life on this planet depends upon the trees, which absorbs the poisonous carbon dioxide which man exhales and in return pours into his lungs the exhiliorating and vitalizing oxygen secreted by its leaves. The tree regulates the temperature of the air in which we live by having itself a fixed temperature of 54° F. The grateful shade of trees on a hot summer's day and the comparative warmth of the forest in the coldest winter's day is due in a degree to the arboreal temperature. Therefore, if city streets were filled with vigorous trees we should have cooler summers and warmer winters.

And on hot days the tree sprays into the air an immense amount of water—32,000 gallons for a tree of full size and leafage.

Here is an inestimable cooling process. And such a tree has in foliage the equivalent of five acres of grass land—a fact further suggesting that a tree standing by our dwellings in the city and lifting its foliage in the air, story above story, would bring to every window which is passed acres of park scenery. In the hot summer days and nights it would purify the air entering the chamber and cool it with a delicious moisture. Finally the tree can absorb and thus remove from the air the emanations from the street and from putrifying waste matter. In this respect trees are the scavengers of the air and protect us from "filth diseases."

It should be added that trees are valuable in that they provide homes for birds which, besides giving pleasure by their song and their appearance, makes for sanitation. The sparrow, for example, is the mouse of the air; and they in the aggregate eat up a great deal of waste which if allowed to putrify, would endanger human health.

THE ELIMINATION OF TUBERCULOSIS.

By John Bessner Huber, A. M., M. D.

My friend and colleague, and noble champion in the anti-tuberculosis fight, Dr. Mary E. Lapham, in a fine article in the New York Evening Post, quoted a paper of mine in Harper's Weekly that the tubercle bacillus is the essential, specific cause of tuberculosis and that, if all sorts and conditions of men and women would combine to help the doctor in preventing the spread of this germ we could eliminate the disease (consumption) from human experience. I had written also that "Tuberculosis is not only a doctor's affair, but is also the most tremendous economic and social degeneration in existence." Dr. Lapham considered these ideas of mine pretty far fetched; so, in extenuation of them I wrote in The Evening Post the following:

Dr. Lapham and I, however divergent in our ideas of getting there, have our ideas on the same goal. The tubercle bacillus is indeed the specific cause of tuberculosis; there is no tuberculosis where the germ essential to the disease does not exist. But there are two elements in the evolution of consumption: the specific cause, the germ; and the predisposition, the state of the body by which it becomes a soil for the bacillus. The tubercle bacillus (I refer to the human type) cannot multiply outside the human body except under laboratory conditions. It is not (in the large aspects we are considering) a notable danger to humankind when contained in human excreta; the danger is mostly from human sputum.

CHILDREN RARELY BORN TUBERCULOUS.

I think children are rarely born having the tubercle bacillus in their bodies, although all too many of them are born with vitiated tissues that are congenial to the growth of this germ. That infants and children become infected with the bovine tubercle bacillus is well recognized, and this situation is now being so conscientiously coped with that I do not think it need enter into the general problem. And

I do not believe that tuberculosis in the other creatures mentioned by Dr. Latham is transmitted to humankind to the degree that we need consider it in this relation. In short, the consumptive's sputum is the main granary of human tuberculosis. And the gist of the matter lies in this: that the tubercle bacillus is the index to the fact, the nature, and the prevalence of the dis-The vital point for the layman to grasp, and then to make a part of his religion, an article of faith-absolutely undogmatic (though my colleague writes of my "dogma"), because nothing can conceivably be more demonstrable—that the tubercle bacillus can get no implantation in a healthy body; for it the healthy body is stony ground; this germ is a miserable saprophyte, depending for its subsistence, growth, and multiplying on dead, or devitalized, or sapped tissues.

That is why tuberculosis is a disease of the poor, of the submerged, a disease developed in sunlessness, cold, starvation, misery; in the overworked, exhausted, anxious body (for what is more predisposing, more sapping, than the anxious mind), and in the body devitalized by previous or concomitant diseases, of which alcoholism is preeminent. Wherefore I have ever maintained that doctors, having demonstrated beyond peradventure the causes of tuberculosis and how it can be prevented, having clearly shown the way, it is "up to" the rest of civilization to work with the doctors in the altogether practicable, though epically difficult, business of vanquishing once and for all the Captain of the Men of Death.

Why difficult? Here are some reasons why:

WHERE THE TARIFF COMES IN.

Think of a tariff that put an average tax of 42 per cent, on the necessities of life. Consider what Dean Henry Wade Rogers has written: "We all know that, no matter

what may be the profits which come into the treasury of a Trust, the wage paid is the prevailing rate, the market price. The tariff has made the "Pittsburgh millionaire" and it has also made the Pittsburgh laborer. What the latter's condition is the Pittsburgh Survey discloses. The consideration shown to the workingman is seen in the provisions of the Payne-Aldrich Tariff. By that act he is taxed 75 per cent. on his woollen suit, 12 per cent. on his shoes, 71 per cent. on his stockings and underwear, 50 per cent. on his cotton shirt, 78 per cent. on his woolen hat and gloves. The dinner pail he carries is taxed 45 per cent. The stove in his home and the pots and kettles are taxed 45 per cent. The common crockery on his table is taxed 55 per cent., his knife and fork 50 per cent., and his spoon 45 per cent. The window glass in his house is taxed 62 per cent., and there is a tax on the lumber or the brick with which the building is constructed, and on the paint and the wall paper used in its finishing. The food with which he makes his frugal meal is taxed, the sugar he uses being taxed 54 per cent.

We doctors tell the poor that in order to get well of their consumption they have to eat abundantly of pure nutritious food, part of which must be half a dozen fresh eggs a day! What brute has ever been so vile as the human being who corners the food market? Those who sell fowl putrefied from storage several years back! Think of millions of eggs being held up for top prices while the poor are sold "rots and spots" (rotten eggs passed through sieves so that chick embryos three-quarters of an inch long shall not get into the stenching mess). And, when Christ's poor are treated like that, people have the Olympian nerve to speak of ours as a Christian civilization!

Then there is the ghastly inhumanity of gauging human labor by a law of supply and demand—a law natural only in so far as it is evolved out of human greed and human meanness—of valuing labor as one does lumber or pork or junk.

Tuberculosis is neither a hereditary nor a family disease—but a house disease, contracted chiefly in unhealthful tenements and workshops. A decade ago, when the idea of model tenements for the poor was launched doctors working among the tuberculous rejoiced; for here, it was felt, would be a most potent agency against the disease. But the model tenement of to-day is

not for the poor—not in New York nor in Chicago; and Mr. James Bryce says it is not for the poor in London.

Nearly ten years ago, with what strength and clarity there was in me, I set forth such things as these in my book, "Consumption and Civilization"; things my colleague, in your columns, gives the impression—all most unwittingly—that I have never considered!

A preacher, on Tuberculosis Day a year ago, propounded the question "Does God Fix the Death Rate"; and he nobly answered himself, that God does not fix the death rate. His God was not that kind of a god; his Providence no such providence. Man fixes the death rate by the war (industrial or with ordinance); the famine and the pestilences he makes, and by the same token, these unholy things are man-preventable.

WHO, THEN, FIXES THE DEATH-RATE?

Who, then, does fix the death-rate? Those theologians, now rapidly diminishing in number, who ignore the demonstrated facts of preventable disease and seek to perpetuate the mediæval superstition that infections are the Almighty's merited scourges: those laymen who consider they are not their brother's keeper and who disparage a tuberculosis propaganda as of no personal concern to them; legislatures which give millions of the people's money for schemes that so frequently turn out crooked, when they will not give a thousand to health departments, for fighting a communal disease that destroys 10,000 lives a year-27 a day in one city alone; venders of patent medicines (mostly alcohol) and consumption cures, nostrum fakers who fleece their victims until the latter have passed far beyond the incipient stage in which physicians could have helped them; a "league for medical freedom," organized to prevent the wise centralization and coordination of health activities; those who overwork women and children in factories and are responsible for sweat-shop atrocities; those employers who require men to work at dangerous trades under intolerable conditions (some industries hold a consumption death-rate above 80 per cent.); those faith-healers and miracle-mongers who would blind the sick to the facts of disease until no cure can be done. Here is an army, having no conscience and owning no religion, that fix the death-rate, which competent physicians, sanatorians,

humanitarians are trying—against such titanic odds—to lower.

I hereby earnestly implore the laity to be henceforth on the side of those forces that are bringing down the death-rate instead of training with malign battalions that are in the business of sending it up.

Dr. Latham is right. Our civilization has been most perversely leaving the brink of a frightful precipice unguarded while at the bottom are we doctors, Dr. Latham and the rest of us, helping to restore what few we can among the hosts that have fallen into the depths below. And though thousands have been helped and many fully restored, every third or fourth adult white and every other adult negro among us could not be helped and has succumbed untimely.

Well, what's to do; are we going to keep

on standing for all this?

Goethe was told that a certain situation "must be so"—there was an immense authority and custom in favor of its being so—it had been held to be so for a thousand years. To which he answered: "But is it so; as it so for me?"

Lister, as a student in surgery, was told that putrefaction in wounds was due to the oxygen in the atmosphere; and there was no other way but that people had to die most horribly of gangrene, in fetid hospitals. But all this did not suit Lister; it was not so to him. And by his initiative humankind was freed of such conditions, that Dr. Wrench, in writing about them, warns the squeamish reader to leave off with the beginning of the description and go on to the next chapter of his book on Lister. To-day—a short generation after—we are amazed and disgusted at a civilization that would placidly endure such conditions.

The Panama Canal, oof which Balboa dreamed, and of which Charles V was prescient, could never be built, declared Humboldt and Froude, because the isthmus was about the rottenest pest-hole on the globe; and De Lesseps' honorable failure was in large measure due to that fact. But all this did not daunt Gorgas; it was not so to him. And he forthwith made a canal possible—be assured it could never otherwise have been built—by transforming that region into a veritable health resort, with a mortality rate only two or three American communities can get under, and which is the despair of most others.

TUBERCULOSIS CAN BE CONQUERED.

Tuberculosis can be eliminated from human experience; all we have to do is to determine not to stand for it. A century ago he who would have said such a thing about smallpox would have been declared fit only for a madhouse. For smallpox was decimating cities and wiping out whole towns and villages. The smallpox conditions of those days did not satisfy Jenner; so he went to work to get rid of that pestilence. And they called him mad, and a lot worse. And yet how practically obsolete is smallpox to-day; in 1912 just two smallpox deaths among some five million people! And the method of getting rid of tuberculosis is simpler (though in practice the task is confessedly titanic), because we don't even know the germ of smallpox, while we have the altogether adequate knowledge of the germ of tuberculosis I have outlined, and know precisely how to cope with it.

Is then the prophecy unreasonable that our posterity a century hence will read with contempt and abhorrence of a civilization so stultified that, having the clear knowledge to prevent it, it continued to be content with so loathsome a thing as consumption?

Much has been done admirably by individual altruists, by societies, and by Governments, against tuberculosis. But the kind of work that has thus far been done will never completely eradicate the disease, because it does not deal adequately with the basic evils by which the Captain of the Men of Death does his gleaning.

And yet we are getting on. Conditions are not nearly so bad as they were a decade ago. While the rots and spots may still remain above ground, we have nevertheless (at last there is some real statesmanship in Washington) got the detestable tariff reduced from an average of 42 per cent. to an average of 26 per cent.; for all that it is still the miserablest laurel ever set on Mammon's brow.... And we are somehow coping too with the Captain of Industries who bloodsweats his millions out of the poor, by demanding, and progressively getting, the living wage.

And if we could but unload ourselves of the charity broker, the charity politician, and the philanthropist who talks about "human derelicts" and "undesirables," we might be able to house the poor, the really poor, in wholesome tenements—a hundred model tenements for every one such now existing—and all conducted on a frankly business basis.

One must see how the tuberculosis problem is beginning to engage the consideration of discerning statesmen, who grasp the idea that all good government exists primarily for the maintenance of the home. And where is the home, what the human relation, what phase of our infinitely complex civilization, that is not wretchedly afflicted by the Great White Plague? Disraeli, Lecky, Goldwin Smith, Hughes—such men have and do comprehend this. Why, indeed, wait for future generations to act? To-day the end may begin to be fought for

if, abjuring the tutelage of private enterprises, and under the Presidency of our greatest statesman since Lincoln, our people will but determine to possess in themselves the sovereignty for which Washington and our fathers fought.

Another fine thing about Goethe. A man came to him with a tremendously difficult task and feared he could not get away with it. "Ach," answered Goethe, "all you have to do is to blow on your hands!"

Go to it, brother.

TUBERCULOSIS AND GENIUS: WITH PARTICULAR REFERENCE TO FRANCIS THOMPSON.

By Arthur C. Jacobson, M. D., of Brooklyn, N. Y.

"I recall a poet. . . . In his case the psychological manifestations were undoubtedly associated with disorder of the body."—Personal allusion in Thompson's prose essay "Health and Holiness."

In a paper published by the author about six years ago* the influence of the toxins of tuberculosis upon temperament and genius was exhaustively discussed and many instances cited. While this article was being written Dr. John Bessner Huber published, in 1906, his well-known book "Consumption and Civilization." A chapter of this book is devoted to a discussion of the influence of tuberculosis upon literature and the arts, with special consideration given to Robert Louis Stevenson, Chopin, Keats and Marie Bashkirtseff. It clearly sets forth that "the quality of genius may, in some cases at least, be affected by tuberculosis." Thus Huber and the present writer worked on the same theme and arrived at identical conclusions without knowledge of each other's researches; indeed, a long time elapsed before the two sets of data were critically compared. It would seem that the validity of Huber's conclusions could have been established in no better way than by the close-following publication of the same findings by an independent worker.

The spurring influence of the spes phthisica and related psychological phenomena upon the creative mind has, of course, often been noted by puzzled observers, as in the case of Schiller, of whom his biographer, Nevinson, wrote that "it is possible that the disease served in some way to increase his eager activity, and fan his intellect into keener flame." phrases of Keats would seem to show that he apprehended the same influence, and Lanier gave himself up quite understandingly to the intoxication. So the workings of the psychological switch board under this special stimulus have often been noted and commented upon by mystified laymen and by some of the inspired geniuses themselves, and physicians of understanding in such matters have doubtless observed them too; but Huber's book contains, so far as the present author has knowledge, the first scientific discussion of this very interesting phase of psycho-pathology.

Stevenson is probably the most familiar example of the genius whose powers are quickened by reason of the general psychic excitation resulting from the action of tuberculous by-products. The natural optimism of such a mind is intensified by the

^{*}Medical Library and Historical Journal, December, 1907, and Aesculapian, December, 1908.

characteristic effect of the toxins until, strange paradox, evil is seen to incite goodpathology to warm and color delightful qualities of temperament. We see a very similar instance in Emerson, likewise an intense optimist. Other notable examples of genius or of high talent as influenced by tuberculosis, studies of all of whom appear in the author's earlier paper, have been John Milton, John Locke, Alexander Pope, Percy Bysshe Shelley, Tom Hood, Laurence Sterne, Thomas De Quincey, Elizabeth Barrett Browning, Molière, Henry Thoreau, Goethe, Balzac, Jane Austen, Samuel But-ler, Edward Gibbon, Voltaire, Francis Beaumont, Walter Scott, Dr. Johnson, Baruch Spinoza, Georges de Guérin, David Gray, Amiel, Washington Irving, John R. Green, Richard Baxter, Charlotte Bronte and her almost equally distinguished sisters, Emily and Ann, Rousseau, John Ruskin, Charles Kingsley, Robert Southey, Nathaniel Hawthorne, Toru Dutt, Robert Pollok, Hannah More, Pierre Jean de Béranger, William Ellery Channing, Immanuel Kant, "Thomas Ingoldsby" (Richard Harris Barham) and James Ryder In addition to these may be mentioned Mozart, Descartes, Mérimée, Richelieu, Raphael, Bastien-Lepage, Jacque-Trutat, Watteau, Paganini, von mart. Weber, Nevin, Purcell, Rachel, Laennec, Bichat, Cardinal Manning, Rush, Trudeau, Godman, William Pepper (2nd), Calvin, Cicero, Cecil Rhodes, Saint Francis of Assisi and the great surgeon Dupuytren, of whom Dr. James J. Walsh has written a sympathetic study in which are described his feverish activities.

The writer is in no sort of sympathy with the theory of some people that genius is a disease, and he has been at some pains to combat it as vigorously as lies in him in an article recently published.* Genius makes for disease (e. g., insanity), but disease cannot, of itself, account for genius. The author is far, then, from claiming that tuberculosis can make a genius of a man, or that it can create even the initial spark. He merely predicates it to be a quickener of already germinating or flowering faculties of extraordinary potentiality, which even without its influence would have marked their possessors as men of remarkable talent or genius. It would be as great an error to advance an argument seeking to prove that any genius was a genius because he was tuberculous as to reason that

*Medical Record, November 23rd, 1912.

any genius was a genius because he was "crazy." It is perfectly evident that many representing the very highest types of genius have owed nothing to the spes phthisica, that is, were not tuberculous. Indeed. we may say that while the genius is exceptionally prone to disease, he is not, as a rule, attacked by tuberculosis. On account of his peculiar nervous organization he is more likely to be claimed by insanity or some allied disability, which may destroy his productivity or color his creations, as it did those of Tasso, Cowper, Guy de Maupassant, Byron and Poe. As a watch is not built to withstand lawn-mower usage, so the delicate organization of the genius is apt to be injured by the hard conditions of our social system, and it is absurd to reason that insanity is ever his good angel. It is his Nemesis, and he does his work not because of, but in spite of, the Damoclean sword. While often of insane temperament, his greatest creative work reflects the man at his best, that is to say, sanest, and to the degree that clinical insanity enters in, to that degree in his work vitiated. We may conceive of the insane diathesis as implanted in accordance with nature's law of compensation. That is its only significance in relation to genius. One can readily understand how misconception and confusion have grown out of the frequent association of genius and disease. The prevailing error has been a putting of the cart before the horse—a confusion of cause and effect.

The difference, then, between insanity and tuberculosis in their effects upon genius, is that the one is antithetic to the faculties that actuate the creative mind, while the other is synergetic. Neither accounts for the fundamental quality of mind which characterizes genius and which is sui generis. Upon the already set psychological switchboard each merely exerts its good or bad effects, as the case may be, like the many other factors which influence human life and thought.

Despite all that has been said by Huber and the author as to the true role of tuberculosis in this sphere, there is hardly any doubt that the popular view will come to approximate that in respect of the relation of insanity to genius. The unsound vulgar view will prevail as regards tuberculosis, because the crowd adopts bizarre and sensational doctrines by preference. For the same reason it holds to a belief in the essential "craziness" of genius. Intellectual

plebeians and the bourgeoisie of science also foster the latter view because they do not desire to do justice to those who possess the greatest gift of God to man, not always with conscious venom, but because of natural dislike and misunderstanding of creative aristocrats so divinely different from the common mould of men. Under Socialism genius would find its Procrustean bed still more difficult to lie in. Said Charles Leonard Moore in the Dial recently: "The great cause which is being tried in the world to-day is that of Genius vs. Democracy. The people everywhere are refusing to admit the existence of superiorities. Hence what M. Faguet calls 'the Cult of Incompetence.' Democracy in art and literature is certainly unthinkable, a contradiction in terms. These things are of and for the few—the many simply do not know what to make of them; only in their weakest or most utilitarian forms do they appeal widely. So powerful in America, however, is the set of the democratic current that nothing can make head against politicians, Preachers, professors, Presidents—all, like the Sausage Seller in Aristophanes, bring their sweet little honeycake to the great Demos. They return in flattery what they get in pay. If an infinitesimal part of the effort and expense, which with us have gone to make the intellectual halt half-whole or the intellectual blind capable of groping, had been given to develop promising talent, we should be to-day all one blaze of glory. But our motto has been, 'Let us rally round our mediocrities, for our geniuses can take care of themselves." Well, very often they cannot, for, as we shall see, the genius is apt to be a good deal of a child, so far as meeting the issues of material life is concerned. Then, because the light of fame brings out flaws which would not be apparent in ordinary people, we assail even the successful genius with the vicious, ignorant, unfair, petty and ill-tempered judgment that he is genius because, forsooth, he is insane, by which a very deep disgrace is implied. This is another vulgar view—that insanity is a disgraceful condition. So to all these foolish beliefs will be added another, postulating tuberculosis along with insanity as accounting for genius.

With this general introduction the writer begs now to present a study of a man who, perhaps better than any of the subjects of his first essay, typifies the tuberculous genius of the highest order—Francis

Thompson, English poet and "the greatest achievement of Catholicism in the nine-teenth century." Like Keats, he was a student of medicine. He studied medicine for six years at Owens College, Manchester, but failed three times in examinations for the degree. His father, who was a physician practising at Preston and Ashtonunder-Lyne, had first tried to make him a priest (both his parents were converts to the Roman Catholic Church), and until he was seventeen, when he took up medicine, he was in training at Ushaw College. After his failures his father appears to have cast him off utterly, whereupon he helplessly attempted to earn a living in the humblest ways, finally going to London, in November, 1885, being then about twenty-six years of age. He worked at first as a publisher's collector, afterward selling matches, newspapers and pencils. He also ran errands, held horses and worked in a bootmaker's shop, sleeping at night on the waste ground near Covent Garden, where the refuse of the great market was thrown. Thus destitute and ill, he became a victim of laudanum, which, as with De Quincey, appears to have enabled him to cope with his neuralgia and tuberculosis. Five years of terrible privation and sickness reduced him to beggary. During these years of outcast life he wrote two poems on ragged scraps of paper, "The Passion of Mary" and "Dream Tryst," and a prose essay, "Paganism Old and New." These he sent to an editor, Mr. Wilfrid Meynell. Believing that they were not accepted he attempted suicide by taking laudanum but was saved by Mr. Meynell, who had traced him to the refuse heap, his interest excited by the remarkable character of the contributions. He was induced to enter a hospital and afterward sent to Storrington, Sussex, to recruit. He then wrote the "Ode to the Setting Sun," other verse, and the "Essay on Shelley." His genius was promptly recognized by Browning and Coventry Patmore. In 1893 he published his first volume of "Poems," written chiefly at Storrington, of which the best known is the "Hound of Heaven," marked by marvelous spiritual insight, metrical beauty and incomparable imagery. In 1895 "Sister Songs" were published, dedicated to the children of Wilfrid and Alice Meynell, his friends and protectors. They describe the days of his outcast experience. From 1893 to 1897 he lived mostly near the Franciscan monastery in Pantasaph, North Wales, cared for by the monks. In 1897 he pub-

lished the "New Poems," written for the most part in Wales. Of these the "Mistress of Vision" and the "Anthem of Earth" rank high. Of his prose work the "Essay on Shelley" abounds in striking thought and verbal beauties. A devout Catholic, of ascetic temper and mystical prepossessions, he may be called the laureate of his Church, though the world claims him as one of its immortals. He entered the Hospital of St. Elizabeth and St. John, in St. John's Wood, in the summer of 1907, and died there on November 13th of the same year. He was buried in the Catholic cemetery at Kensal Green. His tomb is inscribed with his own words: for me in the nurseries of Heaven."

That last phrase furnishes one of the keys to a proper understanding of Francis Thompson's character. This "most august and pontifical of poets," towering over all the "filigree poets and measures of syllables" of his age, retained to the end the child-spirit. It is said that the great artist never outgrows his childhood; his intuition, piercing through things, is the intuition of the child. Much is lost to grown-up Thompson views the world with the grave and solemn wonder of the child. Being a child, with no responsibilities, no doctrines, and "no heavy sense of an apostolic mission," he sings naturally and unconsciously, like the skylark. His poetry takes a religious turn because he hears Nature speak in the language of religion, in which are cast all his own thoughts. He is not, as has been charged, the poet of a little clique of co-religionists, but second in equipment and power to Shakespeare, according to the judgment of Arnold Bennett and many other competent critics not of the Catholic faith. Thompson was not a drunkard or in any way depraved. Naturally, the circumstances of his life gave rise to suspicions, and these derived apparent support because of a remorseful note in some of his verses. His use of laudanum came about in a manner denoting no moral turpitude whatsoever. very innocence and saintliness accounted for many of his difficulties; only purity and sincerity inspired his pen.

Thompson's life on the streets of London was the life of a perplexed child, thoroughly bewildered by the confusion and conflict of city life and unable to meet its distresses and discomforts in any way commensurate with his tremendous powers. Yet before he died this glorious bootblack and beloved vagabond of song was in great

demand as a critic and essayist by the great English literary journals. The world should never give up its atypical boys, says Bliss Perry, speaking of the late maturity of Rousseau. Mendel himself was never able The world ought to pass examinations. never to give up the Thompsons, for all their incapacities. Out of their very failures have come successful careers, and over physical degradation have they won victories and towered in intellectual glory. This is something that ought to be remembered by those who are so dogmatic in classifying our so-called defectives. would not recognize a potential Thompson or a Verlaine, much less distinguish the types. But then they are working for the precious purposes of democracy.

So the life of this shy and sensitive soul, or breath, rather than man, was a kind of Wyndham calls him an angel ascending the iridescent ladder of sunlit imagination. No poet since Shakespeare has attained to his wealth of imagination, subtlety of thought, or magic of language. Read the "Hound of Heaven" and that sublime "Ode to the Setting Sun," ye lovers of Shelley and of Keats, and believe! He differs from the phrase-makers and æsthetes in that his message is the truth. Truth is the simplest of things, and we have the word of that other child, G. K. Chesterton, that religious imagery, so far from being subtle, is the only simple thing left for poets. So far from being merely superhuman, says this fascinating infant, it is the only human thing left for human beings. Thompson appeared at a time of gross materialism and unbelief, at a time when the dogmas of science had enthralled men's minds to the exclusion of spiritual beauties and of faith. In this modern world, but not of it, Thompson, says some writer, had been set down by the angels on an earth which had just outgrown its childhood. What a miracle that the glorious music which expresses this man's splendid faith should have arrested such a world's attention! What does the miracle signify? It means that it is possible for the mystic to set at naught the materialist; to bear him down by sheer spiritual power inst which the negations of those enstaved by the hierarchs of science and the priests of human pedantry avail nothingif the mystic be a Thompson capable of revealing even to the crass modern mind "the Divine Presence, which is beauty." Martin D. Armstrong has explained the difference between the mystic and the ma-

terialist in terms the convincing force of which even the materialistic physician must concede.* Reason, he says, is the outcome of experience: it is a science built up of millions of tabulated facts, a theory evolved from certain data. Each new fact is another datum, and every additional datum must alter the theory. Hence reason is an unstable quantity, an instrument of limited power. "Reason, or the ratio of all we have already known, is not the same that it shall be when we shall know more." Reason must be judged by life, not life by "The more ab-Nietzsche said: stract the truth you wish to teach, the more you must allure the senses to it"-the senses which are the only channels to the soul. Bergson's philosophy mistrusts reason in all the profounder matters of life and regards the emotions—in other words, the promptings of the living soul-as the only reliable guides.

As was the case with Keats, Shelley, Lanier, Schiller and many of the other creative minds discussed by the author in his earlier essay, the time of our "Godsmitten" poet's greatest productiveness coincided with the most active period of his disease.

Like De Quincey, Thompson was succored in London by a girl of the streets—one of those women who, to De Quincey, "were simply sisters in calamity, and sisters amongst whom, in as large measure as amongst any other equal number of persons, commanding more of the world's respect, were to be found humanity, disinterested generosity, courage that would not falter in distress of the helpless, and fidelity that would have scorned to take bribes for betraying." The world is indeed indebted to the one of this class who saved to it a

*Forum, November, 1913.

man who was to create works before which the voice of criticism is dumb. Thompson describes the incident in the following lines:—

"Forlorn, and faint, and stark,
I had endured through watches of the dark
The abashless inquisition of each star,
Yea, was the outcast mark
Of all those heaven!y passers' scrutiny;
Stood bound and helplessly

For Time to shoot his barbed minutes at me;

Suffered the trampling hoof of every hour In night's slow-wheeled car;

Until the tardy dawn dragged me at length From under those dread wheels; and, bled of strength,

I waited the inevitable last.

Then there came past

A child; like thee, a spring-flower; but a flower

Fallen from the budded coronal of Spring, And through the city-streets blown withering.

She passed,—O brave, sad, lovingest, tender thing!

And of her own sad pittance did she give, That I might eat and live:

Then fled, a swift and trackless fugitive."

This was a momentous gift of one child to another; one which saved, for a time sufficient for the recipient to do his work, the life which later

"Faded from a garden to a grave, Passing without a tear into the stars."

115 Johnson Street.

Reprinted from the International Medical Journal.

And his method is so simple. Or rather his methods, for he has two. One is to do things nobody else does, which makes news that must be printed, and the other is to do familiar things in unfamiliar ways, and that also makes news of the same sort. Simple methods, however, are fortunately hard to imitate, else might newspaper revenues suffer—New York Times.

The foregoing appearing in a medical journal, would not impress us particularly, as a professional journal is expected both to appreciate the value of Crile's work and to favor animal experimentation. Coming from a high class popular periodical, it will have an influence over lay judgment that no medical journal could exert.—Buffalo Medical Journal.

PNEUMONIA AND INFLUENZA.

By William Weinberger, M. D., Adjunct Attending Physician to the Lebanon Hospital.

In addition to the world with which we are familiar there is another world, vast, intensely interesting and exceedingly important, which surrounds us on all sides, and which although invisible to the ordinary eye is of vast importance to the life of the plants and animals, we know so well, and to our own life.

We refer to the world of minute plants and animals.

While the activity of these tiny creatures is ever manifest, they themselves are not seen, unless vast numbers are crowded together, as for example the dots and streaks on a crust of bread. To study the separate individuals we must use a microscope, which will magnify them. In fact were a man magnified as much as are these tiny organisms, he would be over a mile tall. So tiny are they that the best milk on the market contains at least 600,000 to every teaspoonful; good milk over four millions; and the ordinary milk sold in cities many times this number.

We cannot escape from this world of the micro-organisms, for our own life is possible only because these do play their part.

In the great chain of existence the carnivorous animals use as their food the herbivora plants. The plants feed on the simplest gases—carbon dioxide and ammonia—on the salts and water.

But the origin of these gases and salts is the decomposed tissue of dead plants and animals. Suppose that the putrefying bacteria should suddenly cease their activity.

Then each plant and animal, when it dies would be embalmed by the sun; there would be no food for plants, and they would die.

Next the plant eating animals and the carnivorous animals would all die, because this one link of the microorganisms had dropped from the chain.

To go further. We are the hosts of myriads of these tiny creatures; they live on our skin and in our intestines and it is doubtful if we could well get along without them.

In the vast host of micro-organisms there are many species, races and varieties, which an expert can distinguish as correctly as can you in a flower garden pick out the roses from the lilacs, lilies, pansies. Not only that but of each of these species one can distinguish varieties, just as the florist distinguishes the tea roses from moss roses and among the tea roses distinguishes the Jacks, Richmond Reds, etc.

Among all these there are a few varieties which are decidedly poisonous to us and which man should try to exterminate just as he tries to kill off among the reptiles the rattlesnakes.

They are the so-called "virulent" microbes, which live at the expense of a host and injure him.

Pathogenic or disease-causing microorganisms are popularly called "germs."

Some diseases are always caused by one and the same germ; as pneumonia, influenza, typhoid fever, cholera, lock jaw, tuberculosis, diphtheria, cerebrospinal meningitis and so forth.

To-night's lecture shall deal exclusively with the two first mentioned diseases: Influenza and pneumonia caused by the specific germ of influenza or grip and the specific germ of pneumonia.

The simple presence of these germs does not cause disease. It is the poisons, called "toxins," which they produce that cause the trouble. When these germs gain access to our blood they are carried about and multiply therein.

Each germ has a favorite organ in which it is especially apt to settle and cause disease. Just as the typhoid germs select especially the intestines, the tubercle bacillus

^{*}A lecture delivered, February 25th, 1914, under the auspices of the Social Service Department of Lebanon Hospital, New York.

the lungs, so does the pneumonia bacillus, although carried by the blood over the whole body and having the choice of practically every organ, usually chooses the lungs.

The pneumonia bacillus is almost ubiquitous, it is an almost constant inhabitant of our mouths and seems always waiting for the time when the soil of our bodies shall be favorable. This is not the case when our bodies are in their normal and vigorous state in which we ought to bend all our efforts to keep them by healthful living and exercise, careful observation of sanitary rules, as will be pointed out later. Allow your constitution to run down by worry, lack of proper food, of fresh air, as confinement in stuffy tenements with their improper ventilation will do, or by undue exposure to excessive temperature changes, both low and high, and the hitherto harmless parasite gains access to our system, and we may contract pneumonia.

Now let us very shortly consider the changes that occur in the lungs in this disease: Our lungs resemble a tree. There we see the trunk, the larger and smaller branches gradually merging into very small twigs at the end of which the leaves are dangling. So we have the large air pipe, leading into the large and smaller bronchi, that gradually merge into the air cells, which compose the lung proper.

Pneumonia is an inflammation of the air cells. The bronchi are not affected in this disease, whereas the grip establishes itself mostly in the bronchi, causing a more or less severe bronchitis.

I will pass over any anatomic changes caused by the pneumonia bacillus. Suffice it to state that in the course of the disease the air cells of the affected lung are being filled with an exudative mass that replaces the air therein, thus making the lung resemble a piece of liver. The onset of an attack of pneumonia is nearly always sud-The man who was feeling perfectly well is suddenly attacked by a terrible pain in the side, which prevents his taking a long breath, and by a severe chill followed by fever. The patient feels very ill from the first and goes to bed at once. His temperature rises rapidly and in a few days is from 104 to 106. He soon begins to expectorate a sputum containing more or less blood. He lies in bed breathing rapidly, his cheeks flushed, his eyes bright. His pulse is rapid, he coughs frequently—a short cough which hurts him badly. The patient continues in this condition from 3 to 10 days. Then comes the crisis and convalescence begins. This crisis in pneumonia is a wonderful phenomenon. Up to the time of it the patient seems to be getting worse, seems to be even at death's door; then within a few hours the temperature falls to normal, the pulse and respiration become slow, the cough ceases and the patient again feels comfortable and is practically out of danger. However, the lungs are by no means normal. Now it depends on nature to remove the exudate in the lung. All these symptoms were due to the poison which the germs were forming in the lungs. The crisis doubtless means that at last the body provided enough antitoxine to get the upper hand. If the body cannot form enough then the patient dies because of the general poisoning.

In acute lobar pneumonia we save life by guarding the patient against heart failure, and tiding him over the poisoning caused by this disease. Leave the patients alone, give them plenty of fresh air and over 70 per cent. will get well.

Of pneumonia patients it has been said that all the young get well, and all the old die; but there are many exceptions to this rule.

Pneumonia is more prevalent in the early spring. It attacks especially the inhabitants of the city, persons of sedentary habits, those suddenly exposed to cold weather (especially half invalids) and above all others, alcoholics.

In the U. S. during the census year 1890, over 9 per cent. of all deaths were due to pneumonia, in 1900, over 10.5 per cent.

Jurgensen states that pneumonia is a house disease. "In the village of Lustnau there were 223 dwellings in which during a period of 8 years the disease occurred once in 40 houses, several times in 44, and not at all in 139."

Infection derived from handling of the bed clothes is exemplified by the following case: A man was attacked by pneumonia and soon afterwards several of his servants who had been cleaning his clothes became ill. One maid who had been thus exposed returned to her home, situated some distance away, carrying with her some linen which had been used in the sick room. Eight days afterwards both she and her sister who occupied the same bed developed pneumonia.

The death rate is considerably higher in the negro than in the white man; and higher for indoor than outdoor occupations. Pneumonia is more prevalent in cities than in the country, indicating that poor hygiene and overcrowding, with the attendant danger of infection, are more important factors than climate and temperature. Emigrants are more susceptible than natives who have become acclimated.

Pneumonia is well known as one of the most fatal complications of influenza.

And this brings us to the consideration of influenza.

A number of you that are old enough will remember the terrific epidemic of influenza that in the years 1898-1890 swept like a giant wave over the old and new world, attacking even 41 per cent. of all

exposed.

Toward the end of October, 1889, there occurred an epidemic outbreak of influenza in St. Petersburg. By November the disease had swept through Germany and France. By December through Austria, Sweden, Denmark, Switzerland, Italy, Spain, Portugal, Belgium and the Netherlands, England, the Balkan States and North America. By March, 1890, it had reached India and Australia, by April and May China and the Gold Coast of Africa.

Berlin was invaded the middle of November. Paris from the 17th to the 20th of November; London the second week of December; Boston and New York the 17th of December. Within a year it had visited nearly all parts of the world.

This is the disease we have to deal with. Truly it gripped everyone within reach and with a suddenness that was marvelous.

Hence the name "La Grippe."

Yet we often see single cases, the specific germ causing it being present in over 30 per cent. of the cases of chronic bronchitis. The germ is everywhere, but conditions for its rapid dissemination seem only occasional.

This bacillus is most apt to attack the respiratory tract. In doing this it causes acute rhinitis and acute bronchitis with—and this is most important in the diagnosis—far more prostration and debility than are seen in other forms of bronchitis.

The bacillus may attack many other organs besides those of respiration.

In a second group nervous features predominate—headaches, profound depression, prostration and so forth. In another group the gastro-intestinal tract is especially affected, and the patient suffers from nausea, vomiting, abdominal pains, jaundice and so on. Numerous are the complications of this disease. There is not an organ that may not become involved. Let me mention especially that appendicitis may be traceable to influenza.

That influenza seldom kills is indicated by the fact that only one person of 200 affected dies. But as a disease which destroys health, few can equal it. The convalescence is long and tedious; it may take months, and for years the patient may not feel perfectly well.

And now let us proceed to another chapter, which is the real object of to-night's lecture, the remembrance of which, I hope, will be of real value in case of necessity. It is the prevention and treatment of pneumonia. For an intelligent discussion of this let us present to you again the salient features of the disease. We learned that pneumonia is an infectious disease, that it is communicated both from person to person and through infected articles, such as dust which is laden with germs, infected bed clothes and so on. That it is a house disease, that it has special predilection to half invalids, those that are weakened by previous diseases and were exposed to cold weather—remember the frequent occurrence in the spring—and above all others to alcoholics, that it invades the lung, rendering the portion affected unfit for respiration, that it weakens the heart and the nervous system by means of a poison, the toxin of pneumonia. *

With these facts at hand how will we then prevent pneumonia? We cannot eradicate the pneumonia bacillus, it is everywhere around and even within us. But we may make it especially hard for this germ to get hold of and establish itself in our organism. How will we do this? The answer will be: By strengthening the natural protective agencies of the body.

A proper way of living, healthful exercise in the open air, regardless of weather conditions, in order to get used to temperature changes; clean, dust-free surroundings, sufficient ventilation of our living rooms, removal of all that can catch germladen dust, such as portieres that in some houses almost attain the dignity of fixtures, proper, wholesome food, temperance in the selection of beverages, keeping of regular hours, sufficient sleep and last, but not least, complete recovery from any sickness, so as to escape invalidism.

Similar is the treatment and prevention of the "Grippe." Only the epidemic factor has to be considered to some greater extent,

as we know that the germs of this disease are largely disseminated by droplets or bubbles of mucus and saliva, which the patient ejects while talking and coughing; accordingly these germs are not found anywhere in the fresh open air of the country or in the air of reasonably clean and decent areas of the city.

Lots of them, however, are to be found in the stuffy, unventilated air of rooms, halls, churches and theatres, or even railroad cars, that were not cleaned satisfactorily from the accumulated dust and emanations from human skins, breath and teeth.

Now in concluding: Remember that the best treatment of pneumonia is its prevention (like of any other disease).

Prevent the onset of the sickness and you are cured of it.

Healthful, hygienic life, such as proper, seasonable food, avoidance of intemperance in any respect, sufficient sleep, plenty of exercise, not in closed, ill-ventilated gymnasiums, but in the open air, regardless of weather conditions, recovery from recent illness to prevent invalidism are the proper means thereto.

When the public has been taught to be as "finicky" about the cleanliness of the air it breathes as it is about that of its food, ninety per cent. of all cases of "grippe," pneumonia and common colds can either be prevented or if contracted, readily be cured.

DIET FOR THOSE PAST FORTY.

DR. CHARLES F. BOLDUAN, director of the bureau of public health education of the Department of Health of New York City considers that whilst overindulgence in proteids (meat, eggs, fish) is common to all ages, especially in America, those of us who are over forty are especially prone; and this fact tends to increase markedly the death rate for the years after two score. Overindulgence in meat especially is largely responsible for the fact that people in that life era are dying off faster than was the case thirty years ago.

The popular belief that it is wise to consume less meat in summer might well extend to all seasons. Proteids specialize in building up and rebuilding the body; fats, starches and sugars are more useful in the production of work and heat. Normally one needs, to repair and replace worn out tissues, three ounces of dry proteid. On the other hand elimination must be maintained; and this is done largely by the kidneys. That is why overeating and overdrinking are apt to break down those most important organs.

What then would be a correct diet? In terms of calories (heat units) the human body has been found to need 3,000 calories, derived from all kinds of food, a day. Thus a day's meals should be about as follows:

Breakfast—Oat meal to the amount of a good sized helping; a glass of milk and a little more with the oatmeal; sugar for the oatmeal and two slices of bread and butter. Here we have 1,000 calories already, which is all that can be allowed for breakfast. If coffee is substituted for milk it is necessary to subtract 300 calories and then make it up by eating another slice of bread, although coffee has no place in this diet.

Luncheon—Toast, milk and fruit to the quantity of 500 calories.

Dinner—Meat, three vegetables with gravy, but only one helping; two slices of bread and butter, one helping of prunes and tea with milk and sugar. This gives 1,500 calories, which makes the 3,000 total for the day.

With this a satisfying amount of water should be drunk at meals; and copiously between meals.

New Proprietor of Public House (that levies a fine for every swear word)—
"'Ere, Bill, that's a penny you owe to the

parson's swear box." Bill—"I'd better do what I done afore—put a 'arf crown in and 'ave a season ticket."—Punch.

CLASSIFICATION OF TUBERCULOSIS CASES.

THE National Association for the Study and Prevention of Tuberculosis has adopted a new classification of cases of this disease, with the results of disease. This classification is paralleled with that heretofore obtained:

Classification of Patients on Examination. Old.

1. Incipient (Favorable)—Slight initial lesion in the form of infiltration limited to the apex of a small part of one lobe.

No tuberculous complications. Slight or no constitutional symptoms (particularly including pastric or intestinal disturbances or rapid loss of weight).

Slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours, especially after rest.

Expectoration usually small in amount or absent.

Tubercle bacilli may be present or absent.

2. Moderately Advanced.—No marked impairment of function either local or constitutional.

Localized consolidation moderate in extent with little or no evidences of destruction of tissue, or disseminated fibroid deposits; no serious complications.

3. Far Advanced—Marked impairment of function, local and constitutional.

Localized consolidation intense, or disseminated areas of softening, or serious complications.

New.

1. Incipient—Slight or no constitutional symptoms (including particularly gastric or intestional disturbances or rapid loss of weight).

Slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours.

Expectoration usually small in amount or absent.

Tubercle bacilli may be present or absent

Slight infiltration limited to the apex of one or both lungs, or a small part of one lobe.

No tuberculous complications.

2. Moderately Advanced.—No marked impairment of functions either local or constitutional.

Marked infiltration more extensive than under incipient, with little or no evidence of cavity formation.

No serious tuberculous complications.

3. Far Advanced—Marked impairment of function, local and constitutional.

Extensive localized infiltration or consolidation in one or more lobes, or disseminated areas of cavity formation, or serious tuberculous complications.

Classification of Subsequent Observations. Old.

Cured—All constitutional symptoms and expectoration with bacilli absent for a period of two years under ordinary conditions of life.

Apparently Cured—All constitutional symptoms and expectoration with bacilli absent for a period of three months, the physical signs to be those of a healed lesion.

Arrested—Absence of all constitutional symptoms; expectoration and bacilli may or may not be present; physical signs stationary or retrogressive; the foregoing conditions to have existed for at least two months.

Improved—Constitutional symptoms lessened or entirely absent; physical signs improved or unchanged; cough and expectoration with bacilli usually present.

Progressive (Unimproved)—All essential symptoms and signs unabated or increased.

New.

Apparently Cured—All constitutional symptoms and expectorations with bacilli absent for a period of two years under ordinary conditions of life.

Arrested—All constitutional symptoms and expectoration with bacilli absent for a period of six months; the physical signs to be those of a healed lesion.

Apparently Arrested—All constitutional symptoms and expectoration with bacilli absent for a period of three months, the physical signs to be those of a healed lesion.

Quiescent—Absence of all constitutional symptoms; expectoration and bacilli may or may not be present; physical signs stationary or retrogressive, the foregoing conditions to have existed for at least two months.

Improved—Constitutional symptoms lessened or entirely absent; physical signs improved or unchanged; cough and expectoration with bacilli usually present.

Unimproved—All essential symptoms and signs unabated or increased.

THE NEW YORK STATE HEALTH LAW.

FOLLOWING are important provisions of the New York State Health Law, such as might be found of interest in other of our American commonwealths:

There shall be a public health council, consisting of the State Commissioner of Health (whose salary is to be \$8,000 the year) and six members appointed by the Governor, of whom at least three shall be physicians and one a sanitary expert. This council is to enact and from time to time amend a sanitary code (applicable everywhere within the State except the metropolis), but each city and town may enact additional regulations not inconsistent with the State code: the council has no executive, administrative or appointive power or duties. Heretofore there have been six divisions of the State Department of Health-administration, sanitary, engineering, laboratory and research, communicable disease, vital statistics, publicity and education. divisions are now written into the statute, and to them are added three new ones (each to be in charge of a director) health child hygiene, public nursing. tuberculosis. The Commissioner Health is specifically charged with the enforcement of the public health laws and the sanitary code, and shall exercise general supervision over local health authorities (many among whom have in the past been grievously negligent of their duties); he must divide the State from time to time into twenty or more sanitary districts, appointing for each a supervisor who must be a physician. duties of these sanitary supervisors shall be: An annual sanitary survey of their districts; organization of district conferences of health officers; adjustment of questions of jurisdiction arising between local health officers; the study of causes of excessive mortality from any disease; the promotion of the registration of births and deaths; inspection of labor economic folly and loss. It is uneconomic, if nothing else, to have exhaustion increase progressively day by day and week by week, camps and enforcement of the sanitary code; inspection of Indian reservations; securing the co-operation of physicians in the improvement of public health; the promotion of educational campaigns on public health.

The Commissioner of Health may employ public health nurses, assigning them from time to time to assist sanitary supervisors and local health officers in the control of infection. He must recommend to city authorities the establishment of hospitals for infectious diseases and shall inspect all such institutions. The powers and duties of town and village health boards are by this act transferred to the respective boards of trustees; should any of the latter fail to appoint a health officer the Commissioner of Health may exercise the powers of such an officer in that locality, the Commissioner's expenses being a charge upon the locality. The Commissioner is empowered to investigate the enforcement of the Tenement House Laws in all cities. Every health officer shall receive a respectable compensation for his services (not as formerly when, in one instance, the village dog catcher got a larger salary than the health officer). In communities of 8,000 or less at least ten cents per annum per inhabitant shall be paid; health officials in populations of 8,000 or over shall have an annual salary of not less than \$800; and they shall have additional compensation (which shall be "equal to the charges for consultation services in the locality") in times of epi-Health officers may employ any number of public health nurses they may deem necessary "within the limits of the appropriation made therefor by the city, town or village."

The Tuberculosis Registration Law of the State is amended to permit the reporting of cases of tuberculosis by phy-

sicians by telephone or in person as well as in writing. Health officers are authorized to cause every reported case of this disease within their jurisdiction to be visited by a public health nurse, unless the physician making the report will carry into effect the procedures and precautions required by the Public Health Law and the Sanitary Code, when the nurse shall act under his direction and supervision. Each registrar of vital statistics must report promptly to the health officer the name and address of every tuberculosis patient that has died, and the health officer must ascertain if such patient had previously been reported by

the doctor signing the death certificate. If any doctor has been found repeatedly to have failed to report cases of this disease the health officer shall report his violations to the local health board, who shall enforce the penalty for the violation (a misdemeanor) of the tuberculosis law. Health authorities are given control over persistently dangerous and careless patients afflicted with an infectious, contagious or communicable disease; on complaint to a magistrate, with proof that such patient is a menace to the community, he may be committed to a hospital for the protection of his family and of the public.

BORAX AN EFFECTIVE LARVACIDE.

NINETY-FIVE per cent. of flies are bred in horse manure. A large part of the fertilizer used in vegetable gardens, which latter are mostly near dwellings, is such It follows then that flies thus manure. bred become not only dreadful nuisances but become also dangers, in the ways now so well known, as carriers of the germs of typhoid fever, tuberculosis, the dysenteries and other serious diseases. Most important, therefore, is a contribution from the Bureau of Entomology of the Department of Agriculture in Washington, whose specialists have discovered that a small amount of ordinary borax sprinkled daily on manure will effectively prevent the breeding of the typhoid or house fly. Similarly, the same substance applied to garbage, refuse, open toilets, damp floors and crevices in stables, cellars or markets, will prevent fly eggs from hatching. Borax will not kill the adult fly nor prevent it from laying eggs, but its thorough use will prevent any further breeding.

The investigation, which included experiments with many substances, was undertaken to discover some means of preventing the breeding of flies in horse manure without lessening the value of this manure as a fertilizer for use by the farmer. It was felt

that if some means of preventing the breeding of flies near a human habitation could be devised, the diseases spread by these filthy germ carriers could be greatly reduced. While the "Swat the fly campaign," traps and other devices for reducing the number of typhoid-carrying flies are of value, they are of less importance than the prevention of the breeding. It was realized, however, that no measure for preventing the breeding of flies would come into common use unless it was such that the farmer could use it on his manure pile without destroying its usefulness for growing plants, and without introducing into the soil any substance that would interfere with his crops.

As a result of experiments carried on at the Arlington Farm, in Virginia, and New Orleans, La., the investigators found that 0.62 of a pound of borax, or 0.75 of a pound of calcined colemanite (crude calcium borate) would kill the maggots and prevent practically all of the flies ordinarily breeding in 8 bushels of horse manure from developing. This was proved by placing manure in cages and comparing the results from piles treated with borax and from untreated piles. The borax, it was found, killed the fly eggs and maggots in the manure and prevented their growth into flies.

In the case of garbage cans or refuse piles, 2 ounces of borax or calcined colemanite, costing from 5 cents a pound upward according to the quantity which is purchased, will effectually prevent flies from breeding.

While it can be safely stated that no injurious action has followed the application of manure treated with borax at the rate of .62 pound for 8 bushels or even larger amounts in the case of some plants, nevertheless borax-treated manure has not been studied in connection with the growth of all crops, nor has its cumulative effect been determined. It is therefore recommended that not more than 15 tons of the boraxtreated manure should be applied per acre to the field. As truck growers use considerably more than this amount, it is suggested that all cars containing borax-treated manure be so marked; and that public health officials stipulate in their directions for this tratment that not over .62 (62/100) of a pound for 8 bushels of manure be used, as it has been shown that larger amounts of borax will injure most plants. It is also recommended that all public health officials and others in recommending borax treatment for killing fly eggs and maggots in manure warn the public against the injurious effects of large amounts of borax on the growth of plants. Purchasers of manure produced in cities during fly-breeding season should insist that the dealers from whom they purchase give them a certified statement as to whether or not the manure in the particular car or lot involved in the purchase has been treated with borax.

In feeding to hogs garbage that contains borax care is also recommended, especially when the animals are being fattened for market. Borax is not a very poisonous substance and the feeding of garbage that contains it to hogs, is not likely to be a serious matter. On the other hand borax in large quantities does produce gastric disturbances and for this reason a certain amount of care is advisable.

The method for using this substance in the case of stables is to sprinkle the borax or colemanite in the quantities given above, by means of a flour sifter or other fine sieve, around the outer edges of the pile of horse manure. The manure should then be sprinkled immediately with two or three gallons of water to eight bushels of manure. It is essential, however, to sprinkle a little of the borax on the manure as it is added daily to the pile, instead of waiting until a full pile is obtained, because this will prevent the eggs which the flies lay on fresh manure from hatching. As the fly maggots congregate at the outer edge of the manure pile, most of the borax should be sprinkled there.

Borax costs 5 to 6 cents per pound in 100-pound lots in Washington, and it is estimated that at this rate it would cost only one cent per horse per day to prevent all breeding of flies in city stables. If calcined colemanite is purchased in large shipments, this cost should be considerably less. At the same time, if the borax is used on the manure only in the proportions stated, its value for use in the garden or for sale to farmers will not be lessened.

In view of this discovery, there now seems little excuse for any horse owner or resident of a city allowing typhoid flies to breed in his stable or garbage can.

It is believed that this information will greatly help the health authorities in their campaign against the typhoid fly. health authorities have long tried to prevent the breeding of flies in city stables through the use of iron sulphate as a larvacide. In the case of iron sulphate, however, a large amount is required, and other insecticides, such as paris green or potassium cyanide, while effective in killing the flies, are very expensive or extremely poisonous. Borax, which is used freely in most households, and is readily available in all parts of the country, has the advantage of being comparativenon-poisonous and non-inflammable, readily soluble in water and easy to handle. It can be purchased at retail for 10 cents a pound, and a single pound used as directed in a garbage pail or open toilet may prevent the breeding of hundreds of dangerous flies.

The details of the experiments with borax and other larvacides will be found in U. S. Department of Agriculture Bulletin No. 118.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

LEISURE HOUR WAS FOUNDED IN THE BELIEF THAT THE PHYSICIAN IS BUT HUMAN; THAT HE LOVES
THE BEAUTIFUL IN THOUGHT AND SENTIMENT AS EXPRESSED IN LITERATURE, AND THAT HE IS AT TIMES
SURFRITED WITH TECHNICAL MATTER. SHORT, CRISP CONTRIBUTIONS ON ANY OF THE SUBJECTS NAMED
IN THE SUB-HEADING ARE INVITED TO THIS DEPARTMENT.

MUSIC HATH CHARMS.

I THINK sometimes, could I only have music on my own terms, could I live in a great city and know where I could go whenever I wished and get the ablution and inundation of musical waves, that were a bath and a medicine.—*Emerson*.

Musick, when rightly ordered, cannot be preferred too much. For it recreates and exalts the mind at the same time. It composes the Passions, affords a strong Pleasure and excites nobleness of Thought. What can be more strange than that the rubbing of a little hair and cat-gut together should make such a mighty alteration in a man that sits at a distance.—Jeremy Collier.

Music the fiercest grief can charm.—Pope.

The man that hath no music in himself, nor is not moved by concord of sweet sounds, is fit for treason, stratagems and spoils. The motions of his spirit are dull as night, and his affections dark as Erebus. Let no such man be trusted.—Shakespeare.

Music will help thee at thy need, in sickness, grief and all adversities. I know a song which the sons of men ought to sing if they would become skillful physicians.—
Icelandic Poem.

The Greeks associated Music with Medicine as attributes of Apollo.—Dr. R. M. Lawrence.

While there may not be much music in medicine, there is a great deal of medicine in music.—Lawrence.

Digestion is facilitated by music; this fact accounts for the popularity of the opera.—Voltaire.

My idea of heaven is eating foie gras to the sound of trumpets.—Sidney Smith.

If thou be made the master of a feast hinder not musick. A concert of musick in a banquet of mine is as a signet of carbuncle set in gold. As a signet of an emerald set in a work of gold, so is the melody of musick with pleasant wine.—Apocrypha.

Every physician should be at least an appreciator of music.

Music is Physic for the Soul—Ancient Egyptian Maxim.

The soul is purified by music and prepared thereby for converse with the spirits of light around the throne of Orumzel, the principle of truth and goodness.—Persian Saying.

Music influences the mind by means of the corporeal organs. It excites fierceness, indignation and cruelty, and is likewise able to inspire the soul with a sense of pity, lenity, tenderness and love.—Montesquien.

By music the minds of the Ancients became formed to the admiration and esteem of proportion, order and beauty, and the cause of virtue was greatly promoted; music, moreover, extends the fancy beyond its ordinary compass and fills it with the gayest images.—Anonymous.

We can no more explain why musical tones in a certain order and rhythm, afford pleasure to man and the lower animals, than we can account for the pleasantness of certain tastes and odors. We know that sounds, more or less melodious, are produced, during the season of courtship, by many insects, spiders, fishes, amphibians and birds.—Darwin.

It has been proved, by physiological effects on men and the lower animals, that musical sounds produce a marked effect on the circulation. The pulse rate is usually quickened and the force of the heart-beats increased in varying degrees, dependent upon the pitch, intensity and timbre of the sounds, and the idiosyncrasy of the individual.—Chamber's Journal.

The Marseillaise was like wine to the French revolutionists and lifted many a head and straightened many a weary back on some of those terrible forced marches of Napoleon's.—Lawrence.

Musical sounds, received by the auditory nerve, produce reflex action upon the sympathetic system, stimulating or depressing the vaso-motor nerves and thus influencing the bodily nutrition; and certain mental conditions are benefited by suitable musical harmonies. Muscle fatigue is overcome by stimulating melodies, as is strikingly exemplified in the effect of inspiring martial strains upon wearied troops on the march. And the complex process of digestion is facilitated by cheerful music, of the kind termed "liver music" by the French, which is provided by them at banquets.—Dr. Herbert Lilly.

Music acts upon the morale by fixing the attention upon sweet impressions, and by calling up agreeable recollections.—Esquinol.

THE VALUE OF PHILOSOPHY.

What is the value of philosophy, and why ought it to be studied, are questions asked and answered by Bertrand Russell, M.A., F. R. S., Lecturer and Late Fellow of Trinity College, Cambridge, in his most absorbing little book *The Problems of Philosophy* (Henry Holt & Co., N. Y. and London).

Many men, under the influence of science or of practical affairs, are inclined to doubt whether philosophy is anything better than innocent but useless trifling, hair-splitting destructions and controversies on matters concerning which knowledge is impossible.

This view of philosophy appears to result, partly, from a wrong conception of the ends of life, partly from a wrong conception of the kind of goods which philosophy strives to achieve. Physical science, through the medium of inventions, is useful to innumerable people who are wholly ignorant of it; thus the study of physical science is to be recommended, not only, or primarily, because of the effect on the student, but rather because of the effect on mankind in general. This utility does not belong to philosophy. If the study of philosophy has any value at all for others than students of philosophy, it must be only indirectly, through its effects upon the lives of those who study it. It is in these effects, therefore, if anywhere, that the value of philosophy must be primarily sought.

But further, if we are not to fail in our endeavor to determine the value of philosophy we must first free our minds from the prejudices of "practical" men. The "practical" man, as this word is often used, is one who recognizes only material needs, who realizes that men must have food for the body, but is oblivious of the necessity of providing food for the mind. If all men were well off, if poverty and disease had been reduced to their lowest possible point, there would still remain much to be done to produce a valuable society; and even in the existing world the goods of the mind are at least as important as the goods of the body. It is exclusively among the goods of the mind that the value of philosophy is to be found; and only those who are not indifferent to these goods can be persuaded that the study of philosophy is not a waste of time.

Philosophy, like all other studies, aims primarily at knowledge. The knowledge it aims at is the kind of knowledge which gives unity and system to the body of the sciences, and the kind which results from a critical examination of the grounds of our convictions, prejudices and beliefs. But it cannot be maintained that philosophy has had any very great measure of success in its attempts to provide definite answers to all questions. If you ask a mathematician, a mineralogist, a historian or any other man of learning, what definite body of

truths has been ascertained by his science, his answer will last as long as you are willing to listen. But if you put the same question to a philosopher he will, if he is candid, have to confess that his study has not achieved positive results such as have been achieved by other sciences. It is true that this is partly accounted for by the fact that, as soon as definite knowledge concerning any subject becomes possible, this subject ceases to be called philosophy, and becomes a separate science. The whole study of the heavens, which now belongs to astronomy, was once included in philosophy; Newton's great work was called "the mathematical principles of natural philosophy." Similarly, the study of the human mind, which was, until very lately, a part of philosophy, has now become separated from philosophy, and has become the science of psychology.

Thus, to a great extent, the uncertainty of philosophy is more apparent than real: those questions which are already capable of definite answers are placed in the sciences; whilst those only to which, at present, no definite answer can be given, remain to form the residue which is called philosophy.

Apart from its utility in showing unsuspected possibilities, philosophy has a value perhaps its chief value—through the

greatness of the objects which it contemplates, and the freedom from narrow and personal aims resulting from this contemplation. The life of the instinctive man is shut up within the circle of his private interests; family and friends may be included, but the outer world is not regarded except as it may help or hinder what comes within the circle of instinctive wishes. In such a life there is something feverish and confined, in comparison with which the philosophic life is calm and free. The private world of instinctive interests is a small one, set in the midst of a great and powerful world which must, sooner or later, lay our private world in ruins. Unless we can so enlarge our interests as to include the whole outer world, we remain like a garrison in a beleaguered fortress, knowing that the enemy prevents escape and that ultimate surrender is inevitable. In such a life there is no peace, but a constant strife between the insistence of desire and the powerlessness of will. In one way or another, if our life is to be great and free, we must escape this prison and this strife.

One way of escape is by philosophic contemplation. Philosophic contemplation does not, in its widest survey, divide the universe into two hostile camps—friends and foes, helpful and hostile, good and bad—it views the whole impartially.

HIS SATANIC MAJESTY.

I AM quite sure that (bar one) I have no race prejudices, and I think I have no color prejudices nor caste prejudices nor creed prejudices. Indeed, I know it. I can stand any society. All that I care to know is that a man is a human being-that is enough for me; he can't be any worse. I have no special regard for Satan; but I can at least claim that I have no prejudice against him. It may even be that I lean a little his way, on account of his not having a fair show. All religions issue bibles against him, and say the most injurious things about him; but we never hear his side. We have none but the evidence for the prosecution, and yet we have rendered the verdict. To my mind this is irregular. Of course Satan had some kind of a case: it

goes without saying. It may be a poor one, but that is nothing; that can be said about any of us. As soon as I can get at the facts I will undertake his rehabilitation myself, if I can find an impolitic publisher. It is a thing which we ought to be able to do for any one who is under a cloud. We may not pay him reverence, for that would be indiscreet; but we can at least respect his tal-A person who has for untold centuries maintained his imposing position of spiritual head of four-fifths of the human race, and political head of the whole of it, must be granted the possession of executive abilities of the highest order. I would like to see him. I would rather see him and shake his tail than any member of the European concert:-Mark Twain.

BOOKS.

THE OCCUPATIONAL DISEASES.

WITH the ever-increasing complexity of our civilization the trades by which increasingly exacting humankind is served have become correspondingly and most amazingly complex. For an instance taken quite at random: Time was when the several kinds of hats were all made by one man-a hatter. To-day there cooperate in the making of only the felt hat, blockers, blowers, pouncers, flayers, curlers, steamers, stiffeners, singers, trimmers, coners, dyers, dryers, feeders, hardeners, mixers, welterers and finishers. To specify, observes Professor Thompson in his admirable work here reviewed, all the subdivisions of labor in a complex industry is to accumulate a catalogue of many thousands of technical terms and easily to become lost in a maze of phraseology.

Organized charity has this defect of its excellence that, though we have the poor as ever with us, it arranges to get removed from our sight, and so from our minds and our sympathies as we go abroad to take the air, the maimed, the halt, the blind, the submerged strata. like manner we have become either inured to or oblivious of much hardship, disease and untimely death suffered most cruelly, in our service. The perusal of such a work as Dr. Thompson's should revive many a wholesome emotion. Many a "human derelict" (we have heard even philanthropists call them that) has come to his most pitiable pass through having helped to make it possible for the rest of us to live magnificently. Such men build our bridges and our skyscrapers; such are "ground hogs" getting "the bends" whilst constructing tunnels beneath our rivers; we are warm by reason that their like are digging for us a mile away from the sunshine; stokers but a few feet from

the keels of our mighty liners are generally pictured as stripped to the waist, whereas, we understand, they have to wear some kind of garment in order that the heat shall not blister their skins; there are many thousands of workers in toxic atmospheres such as blight the vegetation in the factory's vicinity, there is the sandblaster and he who dies almost in his youth of "grinder's rot"; the diamond miner who dies of his pneumonia; the prematurely senile worker in lead, with his impotent wrists and feet, who has, for example, been making the exquisite enameling that beautifies milady's boudoir; the varnisher blinded irreparably by wood alcohol; he with the "phossy jaw," and much else that is dreadful.

For an instance of how much we need education in these premises: prohibited the manufacture and importation of white phosphorus matches 1872; and Denmark in 1874, France in 1897. Switzerland in 1898, the Netherlands in 1901, Great Britain in 1908, Austria in 1909, Canada in 1910. It was only through the persistent efforts of Dr. John B. Andrews, acting for the American Association of Labor Legislation and the United States Bureau of Labor, that sufficient Congressmen were dissuaded from listening to the misstatements of self-interested manufacturers, calloused as to the praecordium, to get the example of more progressive and humane countries followed. The Diamond Match possessed a patent which Company would enable the comparatively innocuous red phosphorous to be used almost as cheaply as the white (at an additional expenditure to the average family of only five cents the year), which it offered to give up to its competitors if they would agree to abandon the white phosphorus process. But the latter declined the offer. Legislation was invoked. It was re-

The Occupational Diseases, by W. Gilman Thompson, M.D., Professor of Medicine, Cornell University Medical College in New York City. Illustrated, \$6.00. New York and London. D. Appleton and Company, 1914.

ported that at a Congressional hearing a flippant congressman, speaking in behalf of the manufacturers who held for the phosphorus, derided the ments of the advocates of a humane bill. A workman with phosphorus poisoning was then brought in. His lower jaw had been removed by operation and the rest of his face was so rotted away that the funny congressman, affrighted by the ghastly spectacle fled the committee The bill was finally passed in July, 1912, making the manufacturers of white phosphorus matches economically prohibitive, and absolutely prohibiting their importation.

So the evolution of human wants and human whims has taxed ingenuity in the evolution of new machinery and apparatus such as is oftentimes most dangerous to the workman; new poisons are employed in the mechanical arts; insidious strains are exerted upon muscles and nerves; new psychic stresses are required; many factors have come to operate either immediately or insidiously, to injure the bodily structure or so to alter the activities of the human machinery as to affect longevity and mortality in a very striking and oftentimes in a very dreadful degree.

Thus have developed many occupational diseases or disorders not only serious in themselves but also predisposing to other afflictions. For example, that noble champion, Sr Thomas Oliver, M. D., through whose most humane activities much really effective Parliamentary investigation has been done, resulting in the control of many industrial diseases, enumerates in his fine book on Dangerous Trades at least sixty trades predisposing to tuberculosis—that Captain of the Men of Death, to whom every third or fourth white, and every other negro between adolescence and the fiftieth year, has been succumbing. In point of fact, it were an easily provable statement that many hundreds of occupations, teaming with vicious environment, make consumptives.

One may dwell here for a moment on the relation of efficiency (that slogan of modern business) to occupational diseases. A really scientific, worthwhile efficiency will produce the best possible results all around, advantaging not only one factor in the economic scheme, but mutually everyone and all. The "practical man" would here, perhaps, invite the reviewer to stick to his quill and mind his own business, but even an "ornery literary feller" is entitled to ask if, apart from humane considerations, it is really a practical business proposition for 185,820 workers in the chemical trades to manifest 163,522 cases of occupational disease, with an average incapacity for work of 8 days per man. And it may further be submitted that a situation like that is everybody's business.

The capabilities of any inanimate, inorganic machinery—of wood, metal, leather and so on, with the amount of finished product that can be got out of it in any given number of hours, can be mathematically gauged, the expense of running a plant, the cost of the raw material, the freightage and the like-such factors are easily estimated. We should learn also to gauge the capabilities of the organic, the man-machine, which is the fundamental factor in the world's work, and yet anyone planning to secure mercantile efficiency that would claim to be scientific—really economic—has got to take into serious and sympathetic account the nature and the capabilities of the sentient, the human machine.

It is a spurious and not a real efficiency—preposterous economic waste, to say the least—to strain, "speed up" and exhaust unduly the workman, either he who toils the more with his brains or he who uses mostly his muscles. The fagged brain or muscle doesn't pay, because it is unreliable; and this in turn means wanton extravagance. And the manufacturer, who is now going to have to do with workingman's compensation legislation, will find it madness indeed to goad the tired minds or bodies of his employees beyond the normal limits

The true scientific management will stop labor before fatigue reaches the stage of unreliability. And not only daily, but weekly exhaustion must be taken into account. A wholesome fatigue, which good food well digested and a good night's rest will recuperate, is the natural (and the blessed) state of man; but exhaustion beyond and without recreation (re-creation, making over) is unnatural and therefore until the human machine, the superbest in the cosmos, must go before its time to the scrap heap; this is uneconomic because the longer any efficient man is on the job the more experienced he becomes; the work becoming routine results more profitably; the employee's experience becomes a valuable business asset to his employer; the troublesome and expensive breaking in of

new hands has less frequently to be gone through.

All combustion whether vital or inorganic is a combination of atmospheric oxygen with the elements (water and food, or coal) taken into the machine; in the one instance the body's discharges, in the other ashes or clinkers are the residue of the burning. Forced draught will the sooner and the more wastefully consume the fuel and wear out the machine, no matter of what kind.

The best surety against industrial accidents is an alert mind in a virile body; on the other hand the ideal predisposition to accident is an exhausted, run-down, devitalized human machine. In Europe they have scientifically worked out the relation between fatigue and accidents; with the result that the latter have been reduced at least fifty per cent.

Bank clerks make most of their mistakes in the late afternoon; this is one of the reasons why banks close early—the bankers have found their employees' mistakes too expensive. And every one knows what dreadful calamity results when railway men work continuously too many hours. A wise corporation, however selfish, will make its hours of labor of reasonable number; and indeed, it is most gratifying to observe that the essential parallelism of efficiency and

humanity is being more and more appreciated throughout civilization.

Thus then the subject of occupational diseases has come to cause potential interest in the minds of many men—physicians, scientists, economists, sociologists, business enterprisers, organizers of labor, insurance men, humanitarians, clergymen and statesmen.

Much restrictive legislation is being enacted, manufacturers are making practical efforts to preserve the health of their employees and to guard them against accidents; experts in sanitation are devising means for prevention or relief; physicians and social workers are co-operating in the gathering of much needed data on which to base national prophylaxis. To all such Professor Thompson's encyclopedic work is heartily commended. Well indexed and most informingly and abundantly illustrated, it is indeed the first American book of its kind, though we have many valuable monographs on various phases of the subject. Practically all other standard works of reference on occupational diseases are by English or Continental authorities. One may not close a review of this book without referring to the American Museum of Safety, which has been developed by Dr. Tolman, and which deserves the heartiest encomiums.

ALCOHOL AND THE MAN MACHINE. The human body, when it is in good health is, bar none, the finest, the most serviceable and the most enduring machine even created on this earth. But sometimes it gets wabbly in its mechanism, becomes unfit for its proper uses and breaks down long before it should in the natural course of events.

There is nothing sadder in life than to see the noble human machine go to the scrap heap at a time when it ought to be strongest and in its best condition. There are a whole lot of things that bring about this pitiful premature decay; everyone knows what they are and some have even felt them—want, disease, starvation, lack of warmth and sunshine, and so on.

But among all these destructive agencies by far the most vicious is alcohol. True it is that a body worn out by intemperance never reaches old age—if indeed it ever gets much into middle life. How alcohol works so dreadfully upon those enslaved by it is explained by Prof. George B. Cutter in his book *The Psychology of Alcoholism*.

Our lives depend upon the right working of our nervous systems. And the nervous system is made up entirely of nerve cells and the fibres which go from them, just like telegraph wires, to every part of the body, no matter how minute. These nerves and their fibres are the most delicate and the frailest things in the body-and are therefore the easiest to destroy by a poison like alcohol. The human machine is regulated by its nervous system; and when this gets out of gear and breaks down the body is doomed to destruction. Such is the way in which alcohol breaks down the human Besides working on the brain machine. alcohol affects also the other organs and parts of the body—the blood and the vessels, the liver, the kidneys and so on. But saddest of all these changes is the dethronement of reason which inordinate alcoholism brings about.

In this relation another book most heartily to be recommended is *The Question of Alcohol*, by Dr. Edward Huntington Williams (N. Y., The Goodhue Company). Dr. Williams considers most wisely the Drug-Habit Menace, Temperance Instruction in Public Schools and its Results, Liquor Legislation and Insanity, The Liquor Question in Medicine, and "What Shall We Do About It"; and the measures of reform he suggests will certainly commend themselves to those who do not make the mistake of confounding temperance with prohibition.

URINARY DISEASES, by Stephen H. Blodgett, M. D., Whitcomb and Barrows, Boston, 1914. \$1.00 net. In the excellent little book Dr. Blodgett has epitomized his lectures on urinary subjects delivered before various training schools for nurses. An especially good feature is the large number of receipts in which saccharin is to be used instead of sugar and the proportions of which were worked out by Alice M. Ellis, R. N.

THE APSLEY COOKERY BOOK, containing 503 recipes for the Uric-Acid Free Diet, by Mrs. J. L. Webster and Mrs. H. Llewelyn. New edition. \$1.40 net. London, J. & C. Churchill, 7 Great Marlborough street, P. Blakiston's Son & Co., Philadelphia, Penn.

To this excellent second edition fifty new recipes have been added and the old ones carefully revised. For those who cannot take sugar and do not like saccharin (and there are diabetic patients who cannot endure the latter) there are several new recipes for sweet dishes in which neither is used.

THE SOURCE, CHEMISTRY AND USE OF FOOD PRODUCTS, by E. H. S. Bailey, Ph. D., Professor of Chemistry and Director, The Chemical Laboratories, University of Kan-

sas, author of "A System of Qualitative Analysis," "Sanitary and Applied Chemistry," etc. 75 illustrations. \$1.60 net. Phila., P. Blakiston's Son & Co. "Tell me what you eat and I'll tell you the kind of man you are," observed some anonymous but very wise philosopher. Professor Bailey tells you in this superb work the nature of the fuel you are putting into your human machine and how best to make selection of such fuel as will ensure the best possible working of that, the most exquisite piece of machinery in the cosmos, with the least blocking of it and the least amount of clinkering. In this book one will find collected the more important facts regarding what we eat and drink—such facts are not readily accessible to the public in any other way. The general principles of food production, manufacture and preparation are treated in such a way that the reader shall gain a practical knowledge as to what constitute the right food products and where such are to be obtained. And Professor Bailey well and most sensibly observes that only by knowing what good, wholesome food is, its composition and appearance, that we can hope for any improvement in the general food supply. "When this knowledge is widely disseminated public opinion will go far toward correcting any abuses that still exist in the food market; for pure food laws are but the crystallized sentiment of the united protest of the people against unwholesome and fraudulent products."

The therapeutic successes of the layingon of hands, the king's touch, metallic tractors and mesmerism are fully explained by
the doctrine of suggestion, the mental energy of the healer being transmitted as a
therapeutic impulse from his subjective
mind through the medium of the nerves to
the affected cells of the patient's body, connection being established by "cellular rapport," that is, by bringing into physical contact the nerve-terminals of the two personalities.—Hudson, The Law of Mental
Medicine.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M.D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS 1 HAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

WOMAN'S WORK IN WARFARE.

"Words are women, deeds are men," said Geeorge Herbert, who wrote in the era of our Pilgrim Fathers. Since his day, too, it has been the habit of our race to regard woman as a passive agent in all movements of social or political significance. Men contribute all the action worth notice in human progress; women supply a sympathetic background for the valorous achievements of their fathers and brothers, they serve to propagate and nourish the race, but for the strenuous work of the world they are too weak. "For men must work and women must weep."

Anatomy, physiology, and psychology all explain clearly why these things are ordained from the beginning. Our great scientists have placed their irrefutable arguments on record, and we might easily demonstrate woman's inferiority in action, if that were our purpose just now.

But, unfortunately for these theories, history seems to be modifying the conclusions of the past generation of scientists. We have the new woman, and she is to be accounted for in some way. In fact, we have several varieties of the new woman—a broadening expression of newness in woman, so it seems.

Only this summer, according to the Berliner Klinische Wochenschrift, a whole session of a learned society in Berlin was devoted to the consideration of the militant suffragette, from the scientific point of view, of course.

The phenomenon of militantism, said Marx, is an inversion of the seemingly natural passivity of woman, and is due to a certain immaturity of the brain, which is exhibited in the violent "short cut" toward a desired object. Violence has been termed the weapon of the weak. We are reminded in this connection of the young men of Greece, of whom the philosophers said that young men "use the harshest measures first." Marx absolves the women from hysteria. In passing, he mentions other types of femina militans, in which the natural passivity of the sex is inverted, and women have revolted against what they believed to be a withholding of their rights, but in the modern type it is the ballot alone which is sought.

In fixing punishment, each militant, Marx says, should be dealt with as an individual, and no wholesale penalties be carried out. Leppmann would not class the suffragettes indiscriminately as criminals. He would look into the components of imbecility and psychic infantilism. Strassmann classed the suffragette movement as a "crowd psychosis." Mass believed that no sane woman could die by hunger strike. Marx in closing said that the movement was a pathological development of neofeminism.

Whether the suffragette is a purely pathological phenomenon or not was left undecided by this meeting, but the *Medical Record* gives the discussion a very unexpected turn in their significant comment:

The question of feminine militancy is now, however, for the time being at least, a thing of the past, overshadowed by the militancy of hordes of the ruder sex. The woman has resumed her rôle of ministering angel and is devoting her energies to relieving as far as she may the suffering caused by the combatants in the larger war.

So it has come to pass that the new woman has a new opportunity, not of her own seeking, to demonstrate some of her claims to equality with man. We are told that the order has gone forth to stop all militant demonstrations until England has rest from her war on the Continent. If the suffragettes can and will stop their violence and control their desire for votes, while a greater problem faces the nation, they will be making a demonstration of considerable weight in the final settlement of their demands. There are men who do not credit them with possessing any degree of self-control or common sense.

But, after all, it is not to the militant that we shall look for those qualities that make woman most useful in war times. This is the time for the new feminism to manifest itself in deeds of service wherever women are found. The women of Europe are deemed worthy to harvest the crops that the men have left standing in the fields. It will be their sorrowful fate to reap the harvest of misery and woe that will follow the horrors of this uncertain war, for the misfortunes of warfare always rest most heavily on the women.

Knowing these things in advance, shall we not expect the new woman to deport herself in a new way? We are sure that the trained nurse will prove her value as an aid in maintaining the military efficiency of the warring powers. We do not forget that it was the military hospital and the barracks that brought out the best gifts of Florence Nightingale, and thus gave to the nurse a permanent place as one of the essential factors of civilization. Nurses today have an infinitely better opportunity than in the Crimean war, and much more will be expected of them. We are confident that they will prove themselves worthy, in courage and endurance, to stand by the

sides of the best medical men in the service of the armies of Europe. Our foreign medical exchanges are full of the stir of preparation. Many doctors and nurses have gone to the front; others are all ready and waiting for orders. Much as the war is to be deprecated and deplored, it is sure to bring out to the superlative degree some of the finest and most precious qualities of the women who have active parts to perform in the drama. Chief among them will be the nurses, and we believe they will prove, even more significantly than in former campaigns, their worthiness to rank with the very highest conservative forces of humanity.

COMMUNITY NURSES IN ILLINOIS.

THREE years ago the Illinois State Federation of Women's Clubs began a tuberculosis survey of the state. As the result of the state-wide interest awakened at that time, Miss Harriet Fulmer, formerly at the head of the Visiting Nurses' Association in Chicago, has been appointed as Extension Secretary of the State Association for the Prevention of Tuberculosis. Her method of extending the good work of her organization is described by Dr. Evans in his health column of the Chicago Tribune:

The central idea of Miss Fulmer's plan is to secure community visiting nurses. Sometimes a nurse is employed to look after an entire county. Sometimes a string of towns located along an in-

terurban line will employ a nurse.

If the nurse looks after a county, the county supervisors are asked to pay a part of her salary. If she looks after a group of towns and villages, that portion of her salary to be paid by the governmental bodies is prorated among the towns and the councils are asked to appropriate the necessary funds.

Town and country rural nursing service is now in operation in Richland, McLean, Livingston, and Morgan counties. In Livingston county Miss Fulmer enrolled 3,000 school children in the Liv-ingston Open Air Crusaders. The rules for mem-(a) Sleep with your window open.
(b) Have fresh air where you work or play.

(c) Breathe through your nose with your

mouth closed.

(d) Get the rest of your family to do the same. Other sections of the state are falling into line. Soon the community nurse will be a regular part of the life of the people, and the state cannot fail to become the richer for having so capable an organizer as Miss Fulmer in the front of the fight against tuberculosis and its attendant misery and mischief.

THE SCHOOL NURSE.

In every progressive school system the nurse is a worthy colleague of the teacher. In fact she is a teacher and she exemplifies, both by precept and example, the soundest principles of physiology and hygiene. These are her specialties and her raison d'etre. Time is increasing the number and scope of her opportunities for teaching the lessons that are to result in a healthier race with a heartier interest in preserving national soundness.

Although the instructive article by Dr. Walker, in this issue of the GAZETTE, is ad-

dressed mainly to the medical inspector of schools and those who support him, we are printing it in this department for the special benefit of the school nurse. doctor takes up some of the basic ideas in the medical supervision of school work. He is particularly helpful to the inspector of rural schools. Every nurse should read the article carefully as a means of wider information. As for the school nurse, she certainly ought to know these facts, for there is no telling when she may be called to take part in the very work that the doctor has been doing so faithfully.

A NURSES' HOLIDAY IN GERMANY.

What the war means to doctors and nurses is indicated in this item printed in *The Hospital* for August 22, and referring to the German Hospital in London:

The German Hospital has lost half its staff of doctors and several of its nurses. The matron of the hospital has stated that five of the medical staff had been taken for the war and that nine of the nurses who were on holiday in Germany had not returned. The hospital, however, is still open

and has over 100 patients, including, as usual, several English, in the wards.

The novice, who sometimes finds the hard work of preparation for nursing rather irksome, has little idea at the time of the stirring events in which she may soon play her part. Those who prepare themselves most patiently and carefully are destined to the greatest usefulness in all times of stress and emergency.

ANESTHESIA BY RECTAL ADMINISTRATION OF ETHER.

THE injection of ether into the rectum is by no means a new method of anesthesia, as it was employed a number of years ago; it seems to have a revival in some quarters at present and it is to be hoped that those who are now trying it in place of the ordinary methods of giving ether will continue their experiments until they are prepared to speak more definitely of its value as a standard procedure.

Dr. H. Clifton Luke, anesthetist of St. Luke's Hospital, New York, in a well reasoned article contributed to the *Medical Record* presents a number of considerations that will appeal to any one who has any familiarity with the operating room and its uncertainties. As to the method and dosage employed in his hospital, he says:

The usual technique, omitting special refinements, is in brief as follows: Effort is made to thoroughly cleanse the intestinal tract, especially the large intestine, beforehand; a hypodermic injection of morphine, sometimes in combination with atropine or hyoscine, is usually given one-half hour before injecting the ether; the mixture of ether and oil (olive oil being mostly used), containing about seventy-five per cent. ether in adult cases, is given in a single dose of six to eight ounces by volume very slowly through a small catheter into the lower bowel. This is injected about thirty minutes before operation, the patient being in bed until the unconscious state is reached. If surgical anesthesia is not obtained in thirty to forty minutes, more ether is injected per rectum or administered for a brief time by inhalation.

Can we say that this method is founded on a good scientific basis? In other words, is it exact or accurate? The administration of ether, to be exact within a reasonable meaning of the term, should have the dosage, or amount administered, under direct control, which in turn exercises a fairly definite influence on the dose or amount actually absorbed. This fundamental requirement does not appear to be fulfilled here: (1) because the entire dosage is estimated, and placed in the intestine for absorption before essential informa-

tion is acquired by the anesthetist regarding, (a) length of time the operation will take (which is often impossible to know), (b) the patient's resistance, susceptibility, or even special idiosyncrasy to the drug; (2) because a portion or all of the mixture may be expelled and lost, in which event an estimation of the amount still retained would be largely guesswork; (3) since there is also a small chance of error if the mixture is given in the usual manner by pouring through an open-topped funnel; over a period of five minutes material loss by evaporation could occur.

The Doctor discusses in detail the question of the absorption of ether administered in this way, and shows that, no matter how carefully the dosage may be regulated, there is no way of knowing how much of the anesthetic will be absorbed in a given time. In other words, a measured quantity of ether is placed in the rectum, but no one can tell, in a given case, how much of it will reach the cecum or how long time it will require to get there; and this is only one condition out of many which have to be considered. In summing up his opinions Dr. Luke says:

The advantages of the oil-ether method outside of its simplicity seem to be more apparent than real. In fact, with the possible exception of selected cases of bronchoscopy, it is difficult to see any indication for its use that cannot be as well and probably more safely met by the modern pulmonary methods. Its chief advantages are said to be found in surgery of the head and neck, since there is no hindrance to the operator in the way of anesthetic apparatus.

Even in these cases, however, he shows that the disadvantages of the oil-ether method more than outweigh its advantages, as is illustrated by the fatalities occurring under his own observation.

Some of the undesirable clinical features which, Luke says, must certainly be looked for in a method involving so many theoretical objections are the following: (1) the rather exhaustive and unpleasant experience accompanying any special rectal preparation, as required here; (2) the occasional necessity and inconvenience of prelim-

inary and subsequent proctoscopic examinations, as a matter of safety and caution; (3) occurrence during the induction period of cramps, with dis-tressing sensations of fulness and pressure in the lower bowel, accompanied by desire for stool; varying degrees of anal irritation occurring early or late; (4) prolonged induction stage with frequent necessary recourse to the inhalation method; (5) any time after the first fifteen or twenty minutes' respiratory depression may rather suddenly or slowly appear, followed by arrested breathing, loss of muscular tone and dilated pu-pils, with the possibility of fatal syncope super-vening; (6) the occurrence of mild to very severe grades of proctitis and colitis, these complications

appearing in more aggravated forms where any pre-existent pathological condition is present; (7) delayed recovery, which may be prolonged for many hours; (8) increased toxemia.

The author concludes very sensibly that any method of administering ether to children, old people, or cases at any age where there is more than the average risk, that does not provide for immediate and definite control, at all times, is certainly hazardous He has shown us plenty of reasons for avoiding this method of anesthesia, and few, very few, advantages in it.

THE AMERICAN HOSPITAL AT NEUILLY NEAR PARIS.

UNDER this caption an American nurse contributes an illustrated article to the American Journal of Nursing, giving one a good idea of this most useful institution.

We quote two paragraphs:

I have seen many hospitals, but it would be difficult to find a better managed or a more perfectly equipped little hospital than the one at Neuilly. I was there for two weeks and as a patient I was more than pleased with the care I received. During my convalescence it interested me, as a graduate, to see the working of the hospital. To me it fully equals, if it does not exceed, some of our best Ameri-

can institutions. Of course, the standard of cooking in France is superior to the average American cooking and I found the food nutritious and tempting. The tray service was well organized and the food was hot.

Altogether my sojourn there was as pleasant as it was possible to be under the trying circumstances of an operation. I now have forgotten all the discomfort, and think only of the good care and great kindness received there. One can hope that this hospital will continue to grow and prosper and that Americans in America will help on the great work for Paris is a second home to many Americans and a number of our people are there at least once a year.

SURGEON-GENERAL GORGAS ON SANITATION IN SOUTH AFRICA

At the invitation of the Transvaal Chamber of Mines, Surgeon-General Gorgas went to South Africa last December to look into the cause of the high death-rate from pneumonia among the native laborers in the mines of the Rand. He was asked also to recommend measures for reducing the death-rate and improving the general sanitary conditions of the mines and their surroundings. His report, which is printed in the Journal of the American Medical Association, is a valuable document, not alone for the information which it gives in well classified form, but as an example of what such a report should be. Dr. Gorgas' most unusual experience on the Isthmus of Panama, in studying the diseases of the negro workers and making the Canal Zone habitable for all nationalities, prepared him thoroughly for his work in Africa and made his recommendations of the greatest value.

The reports of the Native Affairs Department show that for natives employed in mines and industrial works in the proclaimed government dis-

trict of the Transvaal during the year 1903, the death-rate was 71.7 per thousand. This has death-rate has been steadily dropping till the preent time. During the year 1912, for about 300.00 employees in the same area, the rate was 26.84 This rate is still very much too high, as we are considering men in the prime of life.

The death-rate among the negro employed working on the Panama Canal during the same year was only 10. Still this drop from 71 per thousand to 26 per thousand in the course of

nine years is most encouraging.

In 1912 the total death-rate for disease was 22.6 per thousand of the natives. Pner monia led with a death-rate of 9.8; the next highest diseases were phthisis, meningitis and enteric fever. In discussing pner monia, Gorgas says:

Pneumonia is a disease in man due to infer tion by a particular organism—the pneumococcus Individuals and races differ widely in the degree in which this organism affects them. Some rack like the white, resist infection strongly. Others like the negro, have less resistance. Those races like the negro, have less resistance. with less resistance acquire a much higher degree of resistance after long exposure to the infe-The negro when brought into a community in which pneumonia prevails acquires nearly a high a degree of resistance as the white man. If



we take 100 white men and examine them, we shall find that twenty or thirty have virulent pneumococci in their throats. When one of these individuals becomes much depressed from any cause, such as exposure to cold, starvation, severe sickness or any constitutional strain, he is liable to develop pneumonia. If we bring the unacclimatized negro into contact with such persons or other infected negroes, he gets the pneumococcus in his throat and secretions in the same way. The white man, by long exposure to this pneumococcus, having constant slight colds, sore throats, etc., has acquired more or less immunity to the organism. The negro, when he first comes in contact with the pneumococcus, has none of this immunity. Expose the two men to the same depressing agency, give them both a bad cold, for instance, and the white man, through his immunity, resists the pneumococcus, while the negro does not. The organism obtains an entrance in the latter case, and the man succumbs to pneumonia.

If we take a community composed of persons who have had little exposure to the pneumococcus, we shall find a high mortality-rate from pneumonia. If the community is made up of persons who have had prolonged exposure to the pneumococcus, we shall find a low mortality-rate

from pneumonia.

We find for the year 1912, that the 21,000 tropleals had a death-rate from neumonia of 26.30. But the 199,000 non-tropicals had a rate of 8. In general, the tropical is the non-civilized native who has had little contact with the white man's diseases and the non-tropical, the native who has had more or less contact with civilization—and the white man's diseases.

In general, therefore, a community which has had a large proportion of tropical natives will have a high pneumonia death-rate, and a community with a large proportion of non-tropical natives will have a low pneumonia death-rate.

This is a general rule to which there are indi-

This is a general rule to which there are individual exceptions, as is always the case in infec-

tious diseases.

The death-rate for pneumonia among the black employees of the Isthmian Canal Commission in 1906 was 18.74 per thousand, which is higher than the death-rate for this disease among native employees in the Proclaimed Labor District of the Transvaal for any year since 1909.

In attempting to reduce this death-rate Gorgas instituted a thorough study of all the influences affecting this disease in the Canal Zone. Without entering into the careful analysis given in this report we will quote the brief summary made by the

Journal.

Altitude, ventilation and the effect of sleeping in wet clothes were in turn examined as possible predisposing causes, but in each instance with negative results. "The only difference in susceptibility was shown to be governed by the length of time that the laborer had been on the Isthmus." Pneumonia was four and one-half times as frequent among the men who had been on the Isthmus less than three months as among the men who had been on the Isthmus more than three months. In the Panama Canal Zone, however, the pneumonia-rate did not remain high. The pneumonia death-rate figures are: 1906, 18.74; 1907, 10.61; 1908, 2.60; 1909, 1.60; 1910, 1.66; 1911, 2.24; 1912, 1.30. Now the significant fact is that

the sudden and remarkable drop after 1907 was coincident with a radical change in the manner of living. In 1907 the negro laborers were allowed to scatter out along the line of the Canal to "build each man his hut, with a small cultivable piece of land, and bring over his family." It is evident that under such conditions the opportunities for the transfer of pneumococci from carriers to non-immunes are much less favorable than under the barrack system. Gorgas definitely attributes the sudden and permanent drop in pneumonia on the Isthmus to the scattering of the negroes in independent dwellings.

Applying these facts to the Rand situation, the conclusion is drawn that the high pneumonia-rate on the Rand is due to the same factor of barrack overcrowding which was apparently responsible for the initial high pneumonia-rate on the Isthmus of Panama. In accordance with the Panama experience the recommendation is made that so far as possible the negro laborers be allowed to bring in their families and live with them in individual buildings. Where this is not possible much roomier native quarters should be provided. The present allowance (about 14 feet of floor-space!)

is much too limited.

Those who believe that housing is a matter of real sanitary importance will find support for their views in Gorgas' opinion as to the influence of the crowded quarters on the Rand. "The general objection to such crowding is that it causes the respired air to become vitiated. My great objection to such crowding is that it forces the occupants into close personal contact, and therefore largely increases the spread of any infectious disease."

Turning again to the report we find these practical observations well worth repeat-

ing:

In considering preventive measures it must be borne in mind that the causative agent in pneumonia is the pneumococcus, an extremely delicate micro-organism; when exposed to external influences, such as sunlight and drying it is killed in a few minutes, but when resident in the respiratory passages of those infected it lives for weeks and months.

Persons recovering, or having recovered, from pneumonia may, and usually do, carry virulent pneumococci in their mouths and respiratory passages for long periods, and may infect others indirectly by means of their sputum, or by infecting the drinking- or eating-utensils used by several persons in common, or by infecting the common water-tap or cup. It has been observed that natives when drinking from the water-tap place it in their mouths, and in this way may leave a moist film of infected spittle on the tap to be taken up by the next person using the tap. In the mines, one tap has to serve for many laborers on the level, and personal observation has shown the facility with which a line of thirsty natives may become mutually infected.

Not only are pneumococci transferred in this way from persons who have recovered from pneumonia, but it is most probable that pneumococci are acquired similarly from persons suffering from the "common cold," tonsilitis and other forms of inflammatory disease affecting the

upper air-passages.

It is highly desirable, therefore, that means should be used to prevent as far as possible such conveyance of infection as is indicated above. This might be done effectively and economically

by means of some of the well-known types of "bubbling" fountain, or protected taps. These taps prevent the dissemination not only of pneumonia, but also of tuberculosis and syphilis.

The report recommends vaccination against pneumonia as worth a trial; where it has been employed on the Rand it has proven its value in some cases. As for typhoid fever, it could be entirely wiped out at once by vaccination. All native employes should be vaccinated for typhoid fever.

Housing, diet, sewerage, water supply and the fly nuisance, are all discussed, and recommendations are made in accordance with which the living conditions of the natives could be much improved. The suggestions concerning tuberculosis are in accord with the best usage in our own country:

Tuberculosis is caused in man by a well-known micro-organism, the Bacillus tuberculosis. This bacillus can be transferred from person to person in many ways. The most common way is by the sputum of the diseased person. This sputum is expectorated, dries, becomes pulverized, and the bacilli are blown about, and enter the lungs of the well person. Or, without drying, it can get on the hands of others, and thus be transferred to the mouth and enter the system. The greatest preventive measures are therefore concerned with the care of the sputum. White miners having tuberculosis should be eliminated; if elimination is not possible, they should be supplied with spitcups, or cloths into which they can expectorate, and be individually furnished with literature explaining the danger of promiscuous expectoration. With the native miner any attempt of this kind would be impracticable. Careful routine medical examination should be made of the sick, and when a man is found to have tuberculosis he should be excluded from the mines. As far as the native is concerned, the most important single measure is that recommended for pneumonia, that is, scattering, and in the same way as recommended for pneumonia.

Disinfection in the dwellings of the tuberculous is useful and important, and should always be resorted to.

The fifty-four mines on the Rand have now sixty-two hospitals which care for 2,150 patients. There are thirty-eight physicians. "The nursing force in native hospitals is made up of natives who have neither the intelligence nor training for such work," and, in general, the hospitals are poorly equipped and the doctors overworked. This condition could be improved by having fewer hospitals and equipping them in the very best modern style, as has been done on the Isthmus. "With

200 white trained nurses, male and female, in such an institution, you could select your subordinate native nurses from the more intelligent and better educated natives, and thus secure a first-rate nursing force."

Gorgas is very positive in his views on the liquor question. For several years they have been closing saloons in the Canal Zone, "generally at the request of the engineer in charge of the working force," until last year liquor selling was finally abolished in the entire Zone. This is his recommendation for South Africa:

"Alcohol for the natives, I believe, is an un-mitigated evil. It is in no way necessary for his health; in fact it is always hurtful. . . . The two Panama towns of Colon and Panama, at the northern and southern end of the Canal, are not under the jurisdiction of the commission as far as regards liquor-selling. There is no restriction on an employee going to these towns and getting liquor as he wishes and bringing it out into the Zone to his own home. The only prohibition is that it must not be sold in the Zone. But to get liquor he has to make a longer or shorter railroad trip, and go to considerable effort. Our experience has shown that there are a considerable number of men who do not care enough for liquor to make the effort, and therefore do without. Of course, there are a large number who bring liquor out and drink as much as ever; but on the whole, our prohibition of is sale has largely decreased drunkenness. It has increased the efficiency of our working force se much that generally the men in charge of the laborers in the different districts have asked to have their districts included within the prohibited area. I believe that it would be best for the native on the Rand to have no alcohol at all."

This report is of special significance because it comes to us along with the welcome news that the University of Oxford has recently conferred upon Surgeon-General Gorgas the honorary degree of Doctor of Science. The University Orator, in presenting him for this degree, paid him this distinguished tribute, in choice Latin, which is translated for our benefit:

"The eminent American whom you see to-day has, like many of his countrymen, fought in the forefront of the battle. His achievements are too numerous for me to relate in detail. Suffice it to say, that it is he who cleansed Havana; it is he who put fever and pestilence to flight in the Isthmus of Panama, and made possible the long-thwarted construction of the great inter-oceans waterway; it is he who has recently improved the sanitary conditions of the South African mines. He purified foul air; he waged war on the myriad swarms of death-disseminating mosquitos. The result has been an amelioration of the conditions of human life in plague-haunted districts, where once 'in silent fear the helpless healer stood,' and it is now possible to live in comfort and to work with advantage. There can be no better example of those 'Whose skill hath served the human lot to raise, and won a name that endless ages praise.'"

SCHOOL INSPECTION AND SANITATION.

By R. A. Walker, M. D., West Monterey, Pa.

An imaginative artist has depicted the course of human life, as a procession making its way across a bridge, extending over a wide and seething flood. At its broad portals, a crowd of infants press closely upon one another's heels, full of life, and eager for the joy of living. At once, however, it is seen that those near the edge of the footway are being crowded off, and fall into the abyss to perish untimely. The rest rush on, heedless of the fate of their companions. As they grow in stature they decrease in numbers, until, by the time adult life is reached, a sadly diminished proportion of the teeming multitude that started to cross the torrent, is still holding on its way. At last, only a scattered remnant of tottering old men and women are left to take a final plunge from the crumbling arch that stretches out in ruins over the black

Is this allegory a fancy picture, or is it a stern reality, that is being enacted before our eyes? We must, unfortunately, admit the latter.

A study of vital statistics as preserved in civilized countries for the past century, leads to the conclusion that this wholesale slaughter is not a part of Nature's plan, but the result of neglect on the part of man, as has been proven by experiment, where disease has been forced out of certain countries by man's effort, and countless thousands of endangered lives saved. I refer to the wonderful work for the conservation of human life through the investigation and discoveries of that quiet band of indefatigable workers, the bacteriologists. To them we accord the honor and praise of giving us the means of knowing the cause, and consequently the cure of many of our most fatal diseases, such, for instance, as malaria, and yellow fever, being transmitted to man by the mosquito; the plague, by the rat flea; sleeping sickness, by the tse-tse fly; leprosy, by house vermin; and the important part played by the common house fly, in the spread of typhoid fever and many other diseases.

The Department of Health of the state of Pennsylvania, was established under an act of Assembly at the session of 1905. It now has been in active operation less than six years, but in that short time

has done wonders in the conservation of life, and the beneficial effects are only beginning to be felt.

In the year 1906 the death rate in Pennsylvania per thousand persons was 16.5. In 1908 it had fallen down to 15.3, and in 1910 to 14.7. What the future will show remains to be seen. Had the death rate remained the same as in 1906, it would have meant the death of 13,907 persons; hence the saving of life meant the same number.

The death rate of Pennsylvania for the year 1910, the last available data, was: Total deaths from all causes, 112,246 persons, of which number 26,643 were under one year of age, or 24 per cent. of all deaths; 5,820 were less than two years of age, or 5 per cent. of all; 2,502 were between the ages of 2 and 3 years, or 2 per cent. of all; 1,528 were between the ages of 3 and 4 years, or 1.3 per cent. of all; 1,065 were between the ages of 4 and 5 years, or 0.9 per cent. of all; making a total of deaths of children under five years of age of 37,558, or 33 per cent. of all deaths in the state for that year. Then, between the ages of 5 and 20 years, there were 11,796 persons died during the same year, making a grand total of 49,354 deaths, or 44 per cent. of all deaths, coming, we might say, from the school children of Pennsylvania.

As we heretofore said, the conservation of life during the 4 years of active work of the Health Department was 13,907. This fact has an immense personal meaning for all the people of the state of Pennsylvania. Among those rescued lives may have been yours, your wife, or child. But to get down to the mercenary side of the question, political economists tell us "That the most valuable kind of wealth of a state is human life, that human labor is worth at least five times that of all other kinds of capital."

Professor Fisher, of Yale College, has very painstakingly figured out the financial value of every citizen of the state at various ages, as follows: He says, "A new-born baby is worth, to the state, \$90." Now, this does not mean what we think it is worth, for I know some babes that could not be bought for 90 millions. At five years the child is worth \$950; at ten years \$2,000; at twenty years \$4,000;

at thirty years \$4,500; after which the values go down in proportion to age, but averaging about \$1,700 each.

Taking life at this price the state health department has therefore saved the state in money value over twenty-three and three-fourths millions of dollars. Now, during this time, the Department has expended only \$3,000,000, or about \$7 per life saved. Was it worth it? Answer by asking if your own life is worth that much.

And yet we find many people complaining of the terrible expenditure of money by the Health Department, when, if the truth were known, the fellow who shouts the loudest, pays the least State tax; for be it known that only one person out of every 37 in the state pays a State tax, and some of those try to dodge out of their share by lying about how much money they have on interest.

We trust you will bear with us just a minute longer, while we follow out these health statistics a little farther, as I desire to show you a point which I am after, later on, and prove to you a statement that may now seem impossible, but may be demonstrated to be a fact, years from now, that is, the matter of the complete banishment of disease.

As we previously said, the department has been actively at work four years. I now desire to name a few of the most prominent contagious diseases of our state and of your locality to show the decrease during this short period of four years, and thereby prove what sanitation and prevention will accomplish.

During 1910 we had deaths from the following diseases with the percentage of decrease, to wit: Tuberculosis, 10,211 deaths, a decrease of 6 per cent. over last year; Typhoid Fever, 2,450 deaths, a decrease of 30 per cent. over last year; Malaria, 99 deaths, a decrease of 20 per cent. over last year; Diphtheria, 1,970 deaths, a decrease in four years of 70 per cent., caused mainly by the free use of antitoxin, since the Department was established; Whooping Cough, 1,264 deaths, a decrease of 6 per cent. over last year; Measles, that harmless little disease, considered so harmless by so many that it is unnecessary to call a doctor, yet it called away 1,215 patients, almost all being babes, to whom it is very fatal. Smallpox, not one single death, and only one the previous year. Why? Simply because we

have been hammering away at that disease, to banish it, for over one hundred years, and we have won out in Pennsylvania.

Now, this is my point: If smallpox, that dreadful disease that is nearly depopulating parts of the globe at the present time, can be banished, why not all other diseases also? And yet you find some people trying to prevent the vaccination of their children by resorting to the law.

Now I want to recapitulate some of my former figures, and show you that our public schools are being depopulated by this dreadful loss of life, so that we should wake up to the great matter of life conservation. Of the deaths from tuberculosis last year, 16 per cent. were of school age; of typhoid fever, 47 per cent. were from the schools; diphtheria, 87 per cent.; scarlet fever, 93 per cent.; and measles, 17 per cent., this small percentage being on account of the fatality to babes under school age. So, we could go on with this matter of statistics for an indefinite time. but I know figures are dull and uninteresting, even when given to medical men, and we desire to get down to the subject assigned, that of school inspection and sani-

When the last legislative session was held and the school laws were being remodeled entirely, by the adoption of the new school code, much fault was found with the clause regarding medical inspection of all school children. Many cities before this time had city ordinances to that effect, but now a state-wide law was desired. The friends of school inspection wanted to make it absolute and compulsory to all. But such a heated debate was brought on, that it came near defeating the entire code. After a long controversy a compromise amendment was agreed upon and passed, leaving it optional with the various school boards to say whether the inspection should be made or not. But in all cases where it was made it was to be paid for by the state.

Whether this clause was misunderstood, or whether it was intentional, I do not know, but the result was that very few of the school boards ordered the inspection to be made. Some boards expressed themselves as against such nonsense, and passed it over. Those who wisely decided to have the schools of their districts inspected were delighted with

the results. I had the honor to be appointed by the Health Department of the State examiner for two townships, one in Clarion County, and one in Armstrong County, and I am free to state that I was very much impressed with the necessity of the inspection before I was half through with the first school. Had any one told me before I began that one-half or even one-fourth of the pupils of any one school were defective, I would not have believed But such was the case, not only in one school, but in nearly every one examined. One school in Armstrong County showed 60 per cent. defective. Pupils were inspected that were so defective in eyesight that they could not see the largest letters on the test sheet at 10 feet, the letters being 4 inches square.

Notices of these inspections were sent to each teacher, with instructions to read them in school, cordially inviting the parents and directors to be present. Some few availed themselves of the invitation, and gave evidence by their interest and remarks that they appreciated the worth of the work on the part of the state. In some districts not one visitor appeared. But I dare say, if the notice had read, "Prof. Jayhawk will give a free lecture on the diseases of horses and cattle" in the school house on that day, every "mother's son of them" would have been present. If a \$200 horse or a \$50 cow was in danger, interest would have been aroused at once, but a \$2,000 child was neglected.

The inspection consisted in a personal examination of each pupil present as to:

Near- or far-sightedness, Corneal defects, Sight, Inflammation of lids and ball. Degree of deafness, Hearing. Discharge from ears and its character. Sounds in lungs, Breathing, nose or mouth, Lungs and Adenoids in nostrils, Nose. Polypoids in nose, Enlarged turbinate bones.

Teeth, clean, unclean, decayed.
Tonsils, enlarged, degree; inflamed.
Nervous symptoms, chorea, epilepsy.
Skin, eruptions, crusts on head, or lice.
Deformities, enlarged glands, nutrition,

The inspection as to sanitation consisted in examination of:

School
Building,

Condition as to cleanliness,
Light, Heat, means used,
Ventilation,
Condition of cellar, if one existed.

Water
Supply,

Graph Sucket,

Bucket clean, or dirty,

Individual drinking cups.

School
Grounds,

Evidences of pollution,
Out-buildings, c 1 e a n,
filthy, dividing fences,
Sanitary condition of

Drainage of grounds, wet, dry or muddy.

The examination of each pupil was gone through with as heretofore stated, with unlooked for results as to the number of defectives, and duly reported to the department at Harrisburg. I feel sure that some of the parents have heard from the Health Office, as I see some of the children wearing glasses who did not do so before.

But these inspections have their puzzling problems to overcome. Many parents are either too careless to call on a doctor or dentist to correct the defects found, or are not in sympathy with the movement, I do not know which; hence the prime object of the medical inspection in that case is lost. In some few instances physicians are not in sympathy with the movement, and that is a serious hindrance. However, it is simply alarming to see so many children in school with their naso-pharyngeal cavities filled with adenoids, their throats almost closed with large tonsils, and teeth so badly decayed that pus can be pressed out of the gums, resulting usually from the primary teeth not having been removed, and the permanent teeth coming out beside them.

Let me digress at this point for a moment. Regarding the condition usually known as enlarged tonsils, a condition frequently to which very little attention is paid, let me say, no organ in the body to-day is looked upon with any greater suspicion of being a mischief maker, than the tonsil. Professor D. J. Davis, of

Chicago, a specialist on diseases of the throat, has this to say on this subject, taking 100 cases, unselected, as they came into his consulting room, and securing some of the secretion from the tonsil of each one, on microscopic examination he found the following conditions: cases he found germs of tuberculosis; in 14 cases he found germs of typhoid fever; in 11 cases he found germs of diphtheria; and in four others he found evidences of approaching cancer. Now, by this examination we do not presume to say that all of the 56 cases out of this 100 had tuberculosis, but the germs were there, and if they found a lodgment in the proper culture media, tuberculosis would be the result, undoubtedly. So, from this one example, you can readily see the great necessity of vigilant care against the communicability of disease by this route, and especially by the use of the common drinking cup.

One of the most important things to be inquired after was the water supply, how obtained and how dispensed. it pure, was the well or spring in close proximity to stables, cesspools, or surface wash, had the pupils individual drinking cups, was the water bucket clean? In only one school was there any effort made toward sanitation in this matter. In one double school, I found at the door on the outside a large earthen tank with spigot at the bottom, and I was informed the tank was washed frequently and refilled each day, and that every pupil had a cup of his own; and it was a punishable offense to lend your neighbor your cup. Many schools had a dirty, old, rusty bucket, that, if it had been washed this year, its looks denied the imputation. One tin cup of uncertain age completed the outfit of the water plant. At one school I saw this,—I hope you will pardon my mentioning such a revolting sight, but I want to drive home this point, for the purpose of having it remedied,—a large, very filthy boy (so filthy that I reproved him for his condition when I examined him), walked up to the old, dirty bucket, dipped out a cup of water, drank a little of it and set it down; soon a little girl came up, poured back what was in the tin, and dipped out some for herself and drank it. In this same school we found several cases of tonsilitis, and what was there to hinder the whole school contracting it under the circumstances? And

so is many another contagious disease disseminated in like manner.

The springs from which the water supply was obtained, were little removed from filthy pools, surface water, and were covered with leaves, sticks and dirt. When it rained the wash from the surrounding territory was flooded into the water supply.

So, by this description, you may infer that the result of my experience in school ground inspection was far from satisfactory, not only as to sanitation, but decency. The law specifically prescribes what the duty of Directors are regarding closets, but in not a single case did I find the law complied with.

Another, to my mind, common source of infection by one pupil to another, is the extremely filthy condition of the books, as found in many of the country schools. Books are handled and used by the scholars indiscriminately from year to year, as long as they hang together. They must certainly be positive carriers of contagion, children many times not only handling those dirty books, but nibbling at the corners, breathing into them, and afterwards, passing them to some other pupil to be used likewise. I feel sure, while this item is not included in the list of inspection matters, yet it calls, and calls loudly for reform.

One of the leading educators of this state makes this trite and true saying, "Remember that the whole child goes to school, not only the brain for training, but the body as well." How necessary, then, is school inspection of the body, as well as training of the mind. Consider, also, the positive necessity of having proper surroundings to produce healthy bodies.

We are told that the United States weather bureau saves millions of dollars for the ship owners, farmers and fruit growers, by raising the storm flag, and by issuing, from time to time, bulletins fore-telling the weather. So with school inspection, reporting one case of diphtheria, or other contagious disease, may save numerous lives, to say nothing of losses by quarantine, doctor bills, and probable incurable effects from disease.

Medical inspection aims at both protection to the community, and the physical conditions of the pupils of our schools. To ascertain the latent capacity of the individual pupil, and gauge the labors of

that pupil as to capacity. A cast iron code as to a definite standard of work to be done each term by pupils of varying capacity, cannot fail to produce mental overstrain, and nervous disorders leading up to serious, if not fatal results. The average school life of the pupils in our schools to-day is too complex and difficult for the average scholar. There are too many subjects for study in a limited time. This has a tendency in many children to produce unbalanced development and nervous irritability. More systematic attention should be given to individual training, and less to large class teaching. Then fewer pupils would fall down in class examinations.

But, my friends, what can you hope to accomplish when all, or nearly all, of the beneficent laws passed by our law makers for the benefit of the health and well-being of our children, are set at naught by the school boards of, especially, our country districts, where the children are compelled to sit on improperly constructed seats, set at too great a distance from their desks, causing bad posture. Illy ventilated, and poorly lighted rooms are found, rooms either super-heated or not heated at all, schools ungraded, where the bright precocious child is classed with the dullard, the hyper-sensitive and the degenerate pupil, all under the care of an innocent and inexperienced teacher, whose knowledge of mental philosophy is nil. The school boards are often composed of an incompatible mixture of educators, farmers, politicians, and worst of all, professional township or town office seekers, whose sole aim is to get the term through on the least possible outlay for books, salaries and coal, in order to keep down the tax levy. Now, we as physicians could often lend helpful advice in the corrections of the evils I have referred to, but we are never consulted and if we volunteer our advice, we are looked upon as meddlers, and are misunderstood. Even when we advocate school inspection, it is said we are talking for our own financial benefit.

A great responsibility rests upon you, my fellow-members of the medical profession, and upon you, as citizens and parents, to aid the inspector in making the medical examination of your children of effect. His duty is performed when he calls your attention to the defects of your child. For the Health Department in no

case allows him to suggest any treatment. It is up to you, as parents, to see to it that the child is taken to the family physician or specialist, as the case may be, for proper treatment.

In conclusion, let me say, the main object of this paper is to make a general appeal, not only to the medical profession, but especially to the laity, to urge the movement for school inspection and school sanitation, knowing as we do, the great value of detecting and checking diseases and defects in children at the onset, for we firmly believe there are thousands of people abroad in our land to-day, chronic invalids from disease and defects once curable or preventable, who are now hopeless and permanent physical wrecks.

At the present time the subject of public sanitation is much talked and written about, and we believe the time is near at hand when it will be actively taken hold of by the National Government and the "Owens bill" now before Congress, which provides for a national Department of Health, or some other similar measure, will be enacted. It is estimated, and probably true, that more than one-half million people die each year in the United States from preventable or unnecessary diseases, causing an expense for death, sickness, and other losses that is simply beyond our comprehension.

Gratifying as these results are, and that most gigantic engineering problem of modern times, the Panama Canal. France gave it up, not for lack of money or energy, but because they failed to make the locality a fit place for working men to live. To-day, under modern American methods of sanitation, this region is fast becoming a desirable winter resort for our tourists.

On the basis of the French mortality, while they were struggling with the canal problem, had the conditions remained the same, 8,000 persons would have died of yellow fever during the five years our Government has been in control, yet, under their strict sanitary rule, just nineteen persons have lost their lives from this cause.

An object lesson in public sanitation on land, where their efforts are badly needed. Let us hope that it will not be long before our national legislators will be led to see the great need of preventive legislation against disease, that will bring wonderful demonstrations so far

we are sorry our Government makes such a large scale showing what can be done, proud as we must be that this triumph was brought about by our country, yet in the experience of the United States in leaving so many plague spots in our home is at present before the eyes of the world about these much needed results.

HOURLY NURSING.

THE Central Registry maintained by the New York County Registered Nurses' Association announces the establishment of an "Hourly Nursing Service" for those who require the skilled attention of a trained nurse to administer certain necessary parts of the treatment, but who do not need to go to a hospital or to have the constant care of a trained attendant. Inasmuch as the charge is only seventy-five cents per hour, it is certain that this service will meet with a hearty welcome from both physicians and patients.—Medical Record.

HELPING THE PATIENTS.

A recognition of the usefulness of crippled or convalescent patients led to the establishment of a cement shop by the Massachusetts General Hospital at Boston, in the basement of the out-patient department. Here men suffering from heart trouble or temporary disability which requires their daily presence at the hospital, may earn a little money at light work.

Vases, candlesticks and tiles are made in cement under the supervision of a trained worker and marketed at private sale. The hospital gets one-third of the selling price in payment of the materials used, the outside agency gets one-third and the man one-third. If sold at the hospital, the man receives two-thirds of the money.—International Hospital Record.

Questions and Answers.

THE following answers are not official. They are prepared for the Editor.

University of the State of New York, 21st Nurses' Examination.

BACTERIOLOGY AND SURGERY.

Thursday, January 29, 1914—9.15 a.m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. Why is it necessary to repeat, at least once, the process of sterilization of normal salt solution?

Ans. To allow time enough for the development of the spores that escape death by the first sterilization. Within the first twenty-four hours most of these spores develop into bacteria, which are killed by the next sterilization.

2. Define immunity.

Ans. The state of being protected against the invasion of any particular disease.

3. Mention two means by which immunity may be acquired.

Ans. By having a contagious disease and recovering from it; by inoculation.

- 4. What is the most important measure used for controlling the infection of milk?
 - Ans. Strict cleanliness from first to last.
- 5. Define healing by first intention.

 Ans. Union of wounded parts without any resulting scar.
- 6. What preparation of the field is necessary in the application of plaster bandages?

Ans. Cleanse and cover with a bandage of flannel or cotton wadding, or a close fitting stocking, placing extra pads of cotton over bony prominences.

Digitized by Google

7. Describe a course of procedure if secondary hemorrhage should follow the re-

moval of tonsils.

Ans. Keep head elevated. Give ice by mouth. Apply adrenalin chlorid or tannic acid as directly as possible to bleeding points. Apply ice to the neck. Make pressure over the common carotid artery in severe hemorrhage.

8. Mention four classes of wounds.

Ans. Contused, incised, lacerated, punctured.

9. To what is discoloration of the tissues

following an injury due?

Ans. Extravasation, or escape of blood from the circulation into the tissues affected by the injury.

10. Define (a) septicemia, (b) pyemia.

Ans. (a) Disease due to the presence in the blood of pathogenic bacteria and the poisons which they generate. (b) Pus in the blood, or septic infection of the blood with pyogenic germs, resulting in secondary abscesses.

11. Briefly describe the essentials in the nursing care of a patient who has under-

gone the operation of tracheotomy.

Ans. The air must be kept warm and moist by regulation of the temperature of the room and use of a croup kettle or other vaporizing apparatus, under a tent, if necessary. The tube must be kept free of discharges by cleaning with a feather. Patient must be watched closely to prevent asphyxi-

ation by the choking of the tube. If necessary, tube must be removed and wound held open to allow patient to breathe until help arrives. Careful nursing is needed in all details.

12. How may the green of adhesive plas-

ter be removed from the skin?

Ans. If the question refers to the gummy substance adhering to the skin it may be removed by saturating it with a light oil, rubbing well, and removing the residue with a few drops of ether, again rubbed off.

13. Name three of the most important points to be observed in the care of surgical

instruments after operations.

Ans. Account for every instrument provided for the operation. Cleanse carefully, rinsing in boiling water. Wipe thoroughly and put each instrument in its place.

14. What care must be taken when making solutions of carbolic acid? Why?

Ans. Shake or stir the solution very thoroughly until every drop of the pure carbolic acid is completely mixed with the water. Because the pure carbolic acid does not mix readily with water, and if any drops are left in the solution they are likely to cause severe burns when used on the body.

15. Why does alcohol not disinfect if used

stronger than 70%?

Ans. Because strong alcohol coagulates albumins and thus protects some of the bacteria which it is intended to destroy.

DIETETICS.

Thursday, January 29, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. To what classes do the following foods belong: (a) beef, (b) potatoes, (c) eggs,

(d) lettuce, (e) butter?

Ans. (a) Animal proteid, (b) carbohydrates, (c) animal proteid, (d) green vegetable, containing organic acids, mineral salts and a minute proportion of proteid, fat and carbohydrate, (e) animal hydrocarbon.

2. What digestive juices are involved in the digestion of each of the above foods?

Ans. (a) Gastric and pancreatic juices, (b) saliva, pancreatic juice and succus entericus, (c) gastric and pancreatic juices, (d) all the digestive juices, (e) pancreatic juice.

3. Name three kinds of food that should in general be eliminated from the diet of the sick.

Ans. Fried foods, highly seasoned or spiced foods, greasy combinations, such as hot, starchy foods with melted butter or gravies.

4. What is the difference between cocoa and chocolate?

Ans. Most preparations of cocoa contain less fat than is found in chocolate. Chocolate is prepared from cocoa by the addition of sugar and flavoring substances, especially vanilla. As it contains more fat it is richer, usually, than cocoa.

5. Why is human milk more easily di-

gested than cow's milk?

Ans. Because it is adapted by nature to the human stomach while cow's milk is

adapted to the calf. The chief difference seems to be that cow's milk forms a coarse, tough curd in the stomach, while the curd of human milk is soft and flocculent.

6. Give the relative per cent. of fat and proteid in 7% top milk.

Ans. In 7% top milk the percentage of fat is almost twice that of proteid.

7. Give menus for three meals, with a special view to increasing bodily weight in a

person who is otherwise healthy.

Ans. Breakfast: Tea or coffee with milk and sugar; bread, rolls or toast with butter; cereal or rice, with cream or milk; eggs with bacon, or omelet, fresh fish, steak, chops or tripe; potatoes; fresh fruits in season, or cooked apples or prunes.

Dinner: Soup or puree; fish or meats, without frying or high seasoning; potatoes, rice or macaroni; fresh vegetables; simple salads of green vegetables; rice, tapioca or cornstarch pudding, or custard, or ice cream,

or fresh fruit dessert.

Supper: Bread or toast with butter, or milk toast, or bread and milk; eggs; stewed or baked fruits, or fresh fruits in season; milk or cocoa.

Buttermilk may be taken with any meal.

8. What is the chief dietary value of fruits?

Ans. They are "antiscorbutic," laxative, and add variety and relish to the diet.

9. Of what food value are salads?

Ans. They are "antiscorbutic," supplying the body with easily utilized mineral and organic salts. If oil or meats are added, the salad may have a considerable caloric value. They are often laxative.

10. What foods do you eliminate in cases

of diabetes? In cases of nephritis?

Ans. Diabetes: Sugar; sweets of all sorts; bread, biscuits, rice, oatmeal, cornmeal, sago, tapioca, arrowroot; potatoes, turnips, parsnips, green peas, beets, tomatoes, green corn; chestnuts; liver; all sweet fruits, pastry and puddings.

Nephritis: Coffee; all highly spiced foods; soups; fried and salted fish and meats; pork, peas, beans, gravies; fresh bread and cakes; potatoes; macaroni; tapioca, sago; pastry and ice cream.

11. How would you cook rice for an in-

valid?

Ans. Boil 2 cups of water with ½ teaspoon of salt added. Wash 2 tablespoons of rice, and add slowly to the boiling water. Cover and boil until soft—about 20 minutes. Drain through a strainer and dry in oven for a short time. Serve with cream and sugar. (Pattee.)

12. Give your method of baking apples.

Ans. "Wipe and core apples. Put in a shallow dish with one tablespoon water to each apple; more may be added during cooking if necessary; put into the center of each apple two teaspoons sugar. Bake in a hot oven twenty to thirty minutes, or until soft; baste with the syrup every ten minutes. A little nutmeg may be added to the sugar, and a few drops of lemon juice to each apple. Care must be taken that apples do not lose their shape and break." (Pattee.)

13. Mention three ways of cooking eggs, suitable for a patient on a soft diet.

Ans. Soft boiled, steamed, poached.

14. What kinds of food would you give in cases of rachitis?

Ans. Nutritious foods, rich in proteids—not too much starch. Fresh milk, eggs, broth and simple soups, easily digested meats, orange juice; prime, fresh fruits, very sparingly.

15. What diet in general would you follow in nursing patients with nervous dis-

orders?

Ans. A generous and nutritious diet, plainly prepared, so as to digest easily, and containing little or no meat. Oysters, clams, fish, chicken and most kinds of game, butter and eggs may all be allowed in moderation. Rich, made-up dishes, pastry, irritating fruits and excessively starchy foods must be avoided.

VERMONT BOARD OF REGISTRATION OF NURSES.

ANATOMY AND PHYSIOLOGY.

Examination at Montpelier, Vt., Nov. 13, 1913.

- 1. Describe the vascular system of the human body, naming principal organs and tissues.
- 2. Describe the mechanism of respiration, naming organs and tissues involved.
- 3. What and where is the pleura? Its function?
- 4. What is the difference in structure and function of arteries and veins? (a) Name largest artery.

5. Describe the digestive apparatus and name accessory digestive organs.

6. How does pleura differ from other tis-

sues in the body?

7. What and where is the œsophagus?

(a) How long is it?

8. How long is the alimentary canal of the human body? (a) Give subdivisions of the large intestine. (b) Small intestine.

9. What is the process of mastication and

what is effect of same?

- 10. By what avenues are the waste products eliminated from the body?
- 11. Name special senses. (a) Location of each
- 12. What is the diaphragm? (a) Where located? (b) Name organs immediately above and below.

Number each answer and letter each subdivision. Do not write the questions.—Dr. GALE.

MEDICAL NURSING AND HYGIENE.

Examination at Montpelier, Vt., Nov. 13, 1913.

Answer 10 questions only.

- 1. Describe in detail three methods of taking temperature.
 - 2. Define the terms toxin and antitoxin.
- 3. What is acute nephritis? Name two causes. Outline briefly the treatment.4. Define diphtheria? State cause, two
- 4. Define diphtheria? State cause, two frequent complications and treatment.
- 5. Define massage and state four objects or purposes for which it is practised.
- 6. Draw fever chart illustrating typical case of typhoid fever.
- 7. Name four methods by which disease
- germs are spread.

 8. Of what is air composed? How does it become contaminated and how again puri-
- fied? Where is the purest air found?

 9. (a) Name the essential qualities of

potable water. (b) What disease is most commonly attributable to impure water?

10. In nursing acute communicable diseases what precautions would you take to prevent (a) your own infection; (b) carrying the infection to others?

11. Describe in detail preparation for and method of giving a vaginal douche to a ward patient in bed, including all articles needed, quantity and temperature of the douche, etc.

12. What is the proper temperature of a patient's room or of a hospital ward, and how would you keep same at average temperature and provide for ventilation?

—DR. D. C. HAWLEY.

Have your answers to these questions ready for comparison with the answers to be given in a later number of the GAZETTE.

STERILIZATION OF MILK BY ELECTRICITY.

The bacteriological department of Liverpool University has been conducting experiments to ascertain whether electricity can be satisfactorily utilized for sterilization of milk. The milk enters one end of a tripartite tube of definite size at a known fixed level, and during its passage through the tube is acted on by the electric current. Dr. Beattie, the city bacteriologist, has issued a report stating that this method of sterilization is more economical than, and free of some of the objections urged against the older method. Complete destruction of all coli and similar bacilli, resulted. As

these organisms are chiefly responsible for summer diarrhoea among children, the milk sterilized by this process is eminently fit for infantile use. The taste of the milk and its nutritive properties are not altered. The tests so far made on tuberculous milk proved that the tubercle bacillus can with certainty be destroyed. As a result of this report the Liverpool Infant Life Preservation Committee—at whose instance these experiments were made—contemplate installing electrical sterilization plant at their depot for treatment of all milk sold by the corporation.—The Medical Officer.

TECHNICALITIES.

ITEMS of value to nurses will be welcome to this column.

USE THE CATHETER.—Unconscious patients should be catheterized every eight hours.—Od Quarterly.

ORIGIN OF DISEASE.—95 per cent. of all diseases have their origin in the digestive canal.—Charcot.

To Remove Iodine Stains.—Tinctureof-iodine stains may be removed from clothing or the skin by using strong ammonia water.—Int. Hosp. Record.

BEDSORES.—Bedsores will be found to heal up nicely under the influence of the mild zinc ointment. Apply it three times a day on a soft white cloth.—Od Quarterly.

Scrubbing the Field of Operation.—In cleaning and antisepticising a field of operation, always begin at about the center of the proposed incision and scrub outward in circles. In this way the dirty water and debris from the skin is washed away from the proposed field of operation, instead of being carried backwards and forwards from skin surface perhaps unscrubbed.—Amer. Jour. of Surgery.

INCIPIENT BREAST CANCER.—Do not be too sure that a small breast tumor is not cancerous because the patient is young. Such a small tumor even in the breast of a young virgin is sometimes scirrhus.—Amer. Jour. of Surgery.

REMOVING EGG STAINS FROM SILVER.—A pinch of table salt taken between the thumb and finger and rubbed on the spot with the end of the finger will usually remove the darkest egg stain from silver.—Od Quarterly.

RED LIGHT AND MILK.—But if even unsterilized milk is placed in a red bottle or in a bottle wrapped in red paper in the full sunlight it keeps perfectly good for ten hours.—Scientific American.

CAUSTIC POISONS.—In cases of poisoning with caustics there is always danger, apart from perforation by the stomach tube, that the introduction of large quantities of water may cause rupture of the damaged gastric wall. Hence only a few ounces of fluid should be introduced at a time, and these under low pressure.—Od Quarterly.

Post-Operative Pneumonia. — The "pneumonia" that occurs as a post-operative complication is quite different in several respects from primary lobar pneumonia and especially in the prognosis.—American Journal of Surgery.

SODIUM HYPOSULPHITE FOR IODINE STAINS.—To remove iodine stains from bacteriological instruments or the hands a strong solution of hyposulphite of soda is good and effective. The solution should be quite strong, and, after its application the solution should be rinsed off with warm water, and the stained article dried well.—Od Quarterly.

VINEGAR ON TENDER HANDS.—In operating upon septic cases, if for any reason gloves are not worn, it is a good precaution to dip the hands in vinegar, which, through the resulting smarting, will reveal invisible cracks and abrasions. These sensitive places can then be covered with collodion.—Od Quarterly.

TEA, COFFEE OR COCOA STAINS.—Borax is best. Pour boiling water through the stain, while it is wet, if possible, place some powdered borax on and pour on more water, then wash, boil and dry in the sunshine. Sunshine seldom fails to remove such stains as tea, coffee or scorch marks.

—Nursing Times.

WARD TEMPERATURE.—It is an excellent plan to keep day and night four-hourly ward temperature charts. These should be kept charted up by the nurse in charge. By this means an irregularity on the part of the heating apparatus can at once be detected and remedied.—Hospital.

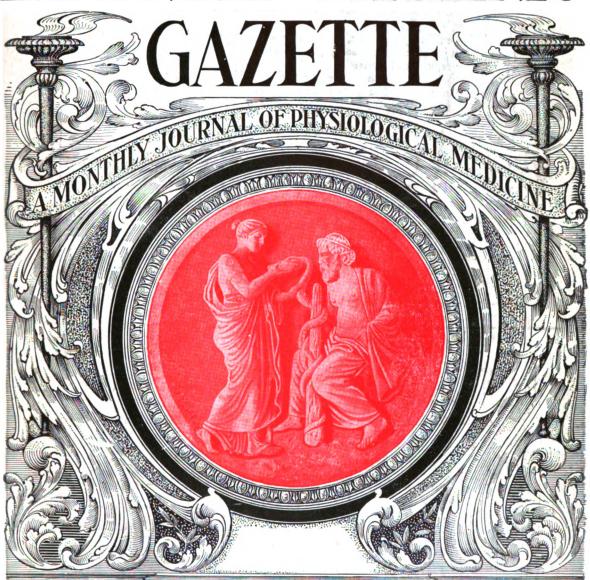
To CLEAN WATCH CHAINS.—Gold or silver watch chains can be cleaned with a very excellent result, no matter whether they be matt or polished, by laying them for a few seconds in pure aqua ammonia; they are then rinsed in alcohol, and finally shaken in clean sawdust, free from sand. Imitation gold and plated chains are first cleaned in benzine, then rinsed in alcohol, and afterwards shaken in dry sawdust.—Od Quarterly.

BLOOD STAINS.—These should be soaked in salt and water for some hours, then wring out and rub in a fresh supply of salt and water. Next wash in the ordinary way, with soap and warm water, boil, rinse and dry in sunshine.—The Nursing Times.

LOCAL HEAT FOR A COLD.—For the first symptoms of cold in the chest, constriction, soreness, harsh cough, apply heat persistently, uninterrupted, for from two to four hours. Dry heat, if very early, and moist heat in the later stages. Heat always; cold never. Accept no other dictum.—Od Quarterly.

THE

DIETETICANDHYGIENIC



PUBLICATION OFFICES

87 Nassau St.

New York

\$1.00 Per Annum. 15c. Per Copy.

Entered as Second-Class Matter at the New York Post Office.

The best antiseptic for purposes of personal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teeth.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts

water; it also forms a useful application in simple disorders of the skin.

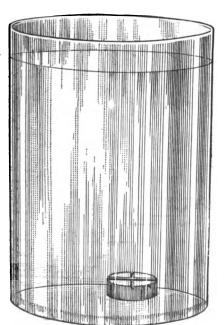
In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ed libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY LOCUST AND TWENTY-FIRST STREETS :: ST. LOUIS. MO.

PTOMAINE POISON



Where the patient is suffering agony from ptomaine poisoning as a result of tainted food, place

ONE TABLET OF INOSOL

in one tumbler warm water.

Let the patient drink entire tumblerful.

It has many times been shown that this procedure counteracts the influence of the ptomaines and brings relief most promptly. Many patients now dead, might have been saved had physicians all known this valuable

CHINOSOL CO.

RMELE PHARMACAL CO. SELLING AGT., 54 SOUTH ST., N. Y.

SAMPLES AND CLINICAL REPORTS ON REQUEST Digitized by Google

THE

DIETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A. M., M. D.

Vol. XXX.

NOVEMBER, 1914

No. XI

EDITORIALS.

THE MASKED SYMPTOMS.

THE Health Commissioner of the metropolis, Dr. S. S. Goldwater, received a letter from "the president of a large manufacturing corporation, well known for its business efficiency and progressiveness," and which disclosed "an intelligent appreciation of the possible usefulness of the periodic physical examination of large groups of employees." This prescient president learned of three cases of tuberculosis among his 130 employees, which fact has led him to consider the question of requiring a physical examination of all his employees, an examination adequate to determine the general state of health of each, to protect those who are well against the risk of contagion to which they should not be exposed, and to guide him in helping those employees who are not in good health and who may require aid. With this humane object in view he wrote asking the Commissioner if there is any provision making for such inspections, either by the City or the State authorities, and, if so, how he might engage for them. He was answered that the Health Department of the City of New York is without funds for such work; but it "strongly urges employers, whenever possible, to institute such examinations for the benefit of their employees and with the latter's consent."

It is entirely possible for such examinations to be instituted. And when this wise president finds the way, as he certainly will, it will be shown him that at least twenty-five per cent. of his employees are sick men—that is if they are average workmen. And as everyone who is wise and humane is sure to benefit by these fine qualities, this president will by such examinations find the service rendered him by his employees enormously increased in economic ways.

In this relation we emphasize the work of the Life Extension Institute in New York City, which we considered in the number of THE GAZETTE of May last. This Institute is chiefly philanthropic, for although a very moderate fee is charged the income is chiefly expended for improving its service and extending it, so far as possible to all civilization. Its board of directors is made up of men whose lives have been dedicated to public welfare and others noted for business capacity of the highest order. Ex-President Taft stands at its head. General Gorgas is its Chief Sanitary Adviser, Professor Irving Fisher of Yale heads its Hygiene Reference Board. Such gentlemen as these serve without compensation in the "work of human salvage."

Efficiency is the business slogan of the twentieth century thus far—an inspiring slogan; none better, except one, as we shall see.

And yet ideal efficiency is not going to come anywhere near realization if we do not understand that the human machine cannot be really efficient if its various parts (its organs and tissues) are not sound, well adjusted to one another, properly fuelled (with wholesome meat and drink), not strained beyond its factors of safety, and running smoothly.

In fact any kind of efficiency that does not call for human health, will never be anything but a spurious efficiency, economically disastrous.

So the efficiency slogan, to be effective, has got to be a kind of sub-title to the Life Conservation slogan, the greatest idea which twentieth century medicine has thus far evolved.

It is worse than useless, it is criminal ignorance, to expect ideal human efficiency in the face of such facts as the following:

Every third or fourth among us had been dying, between fifteen and forty-five, life's economically most productive years, of tuberculosis. There are trades—stone-cutting, for example—in which eighty-five per cent. of the workers between twenty-five and thirty-four die of consumption.

There are hundreds of dangerous trades conducive to consumption. Volumes could be written—whole libraries, indeed, have been written—on this phase alone of the subject of economic inefficiency, I can only indicate here the waste—almost too great to be grasped by the mind—resulting from our sufferance of this entirely preventable disease.

One among eight of our women dies most cruelly of cancer, after dreadful sufferings through many months, several years; many such unhappy women have kept working until this physical impairment has made them give up their tasks. Apart from the human anguish here connoted, what an economic loss is this.

Of twenty thousand people who applied for life insurance, imagining themselves in sufficiently good health to get policies, forty-three per cent. were found to have some kind of heart or kidney or artery ailment; and were either turned down absolutely or were assessed higher premiums than ordinarily.

Six hundred and fifty thousand working people—and who among us is not a worker—die annually when they have no business dying, die long before their time, of preventable diseases.

Medical annals teem with such depressing facts.

THE CONSERVATION OF VISION.

Among the many things in modern civilization that tend to impair the human vision is improper illumination, natural or artificial.

Poor lighting is bad; at least equally bad is too intense light. Dr. Ellice M. Alger, of New York; reminds us that the human eye is but an expanded portion of the brain; also that vision is an exceptionally tender and complicated function. Any organ exercised well within its limits tends to increase in power and facility, whilst if overworked it becomes less and less fit for any work at all. A man habitually using his eyes in strong light decomposes his "visual purple" faster than it can be regenerated. Even normal, healthy eyes are strained by overuse especially under unfavorable con-

ditions and in lowered health; and as most eyes are abnormal, or at least not normal, the individual has to cope with not only a bad environment and lowered health, but also his inherent optical defects. With the many modern methods of commercial lighting by gas and electricity the composition of light as well as of its intensity has become important for the ophthalmologist to In the days of oil and candle light the question was simply one of quantity, the quality being generally soft and benignant. But modern lighting, whether of gas or electric is often so intense as to be extremely fatiguing, and worse; these means of illumination also contain many more of the violet and ultra violet rays of the spectrum, which are useful in light

therapy and in radiography, but are certainly amiss for illuminating the printed page or the object upon which the artisan must work. Lights that are sufficient to tan and "sunburn" the skin, and perhaps to induce baldness, are no doubt responsible for much of the present day asthenopia. Nor can one doubt the pernicious effect of such illumination on the deeper optical structures; how much cataract results from this cause, who can say? Certain it is that stokers, glassblowers and the like, who are continually exposed to very intense light and heat have an enormously increased liability to cataract. Illumination made up of the red and yellow rays of the spectrum is the best for visual purposes; and the problem of securing a light which shall allow the maximum of efficiency, comfort and convenience is one for the illuminating engineer rather than the physician. The solution of this problem were not only a humane procedure and one most conducive to comfort, but one also very profitable alike to inventor, to employer and to employee, and all those who read—that is, to everybody.

The importance of the matter is increased by the consideration that eyes are not merely optical adjuncts but are integral parts of the body. They affect mutually the functioning of most other organs. Inefficient eyes cause most chronic headaches, much depression and fatigue, many indigestions, most of the aberrations of genius and of les demifous (the half-witted) and not a little marital infelicity.

WHY RAILWAYS WON'T EMPLOY INTEMPERATE MEN.

RAILWAY directors are now requiring their employees either to use alcohol and tobacco very moderately or to abstain altogether from their use. There is a reason.

Intemperate railway employees have been found not to be able to recognize red and green, which are the two colors most exclusively used in operating trains. treacherous and unsuspected is this defect of vision that only an accident, with loss of life to innocent people, might reveal to the engineer that he is unable to recognize the signals.

Of course there are plenty of other good reasons for not wanting tippling workmen on trains; but this visual defect is certainly enough to discourage their employ-Those who are every day responsible for the lives of thousands of passengers would themselves be criminal if they were to take the risk of engaging such men.

This trouble, which doctors call "toxic amblyopia" is more common among regular imbibers—the "chronic soaks" than among occasional drinkers. It varies in degree from a slight dimness of vision through the inability to recognize colors toblindness.

It is perfectly true that people get "blind drunk" from even a single spree; and sometimes the blindness is permanent, especially when there is wood alcohol or fusel oil in the whiskey—the kind of stuff you put on old doors to scrape off the paint with.

Nor is alcohol always the only thing at Inveterate smokers have precisely the same affection of vision. Red and green appear to them as different shades of grey. And in time some of them (and not a few, sad to say) go hopelessly blind.

It has been found that among 138 people (mostly men of course), who have this deplorable defect of vision, 64 were hard drinkers, 45 used both alcohol and tobacco to excess, and 23 were inveterate smokers. This accounts, as you observe, for all but six of the 138 "visual defects."

Carlyle has drawn attention to the fact that in the Germanic languages, the words "healthy" and "holy" were originally identical.

"The man who has solved the problem of how to make the most of time has found the way to make the most of himself."-Walter H. Cottingham.



STIMULANTS.

COFFEE and tea are generally consumed merely for the pleasure which the warm drink gives, states Prof. H. E. Ogden in his book on *Rural Hygiene* (The Macmillan Co.). Yet both these beverages have a certain stimulating effect on the nervous system.

When a tired woman refuses food and drinks instead cup after cup of strong tea she is cheered and exhilarated for the time being; but this is only at the expense of nerves and muscles, which must sooner or later break down if the habit of "tea-tippling" is persisted in to the exclusion of food.

Similarly, when a man under stress of business or depression drinks strong black coffee to keep up, he must pay the penalty for the stimulant some way or another, somehow or another.

The natural forces of the human body are able to do normally a certain amount of work; and their ability to perform this work is directly in proportion to the energy derived from the food-supply taken into the body.

A machine is kept going by the fuel in the engine; the machine may be made to go faster by means of bellows. Coal is the fuel, the bellows stimulate the flame.

In the human machine food (meat and vegetables) are the fuel; tea, coffee, alcohol are as the bellows—they are not the fuel.

No amount of tea, coffee or alcohol will add to the living tissue (the nerves and muscles and organs) of the body; these stimulants merely goad the nerves and muscles to further action, however tired and unwilling they may be.

When the stimulant is stopped, or after a time in spite of the stimulant, the exhausted nerves and muscles refuse to continue their work, and the weakened body rebels, stops work and may even die.

A certain amount of stimulants at rare intervals, when there is unusual stress, or for particular occasions may do no harm. At such times we may consider the stimulants the savings banks of the tissues.

But the pity of it is that if the habit is once started the ultimate bad effects are forgotten in the apparent relief of the moment.

Besides the baneful stimulative effect of tea, a substance known as tannin is developed in the brewing, and this tannin is really harmful on account of its strong astringent property, which tends to injure the delicate membrane of the stomach. Sometimes tired housewives, without knowing it, are really drinking ink. Ink is a liquid composed of iron and tannin dissolved in water.

The tea may be brewed in an iron kettle and left standing "to take a drop" of, from time to time. Such tea left standing is sure to be strong in tannin, and the iron from the kettle makes the ink.

The bitter taste of the tannin is disguised when milk is used with the tea; tea without milk or cream may be safer than tea with milk, because without the milk the bitter taste would prevent the tea being boiled so long.

The fact is that in the faculty of judgment and of reaching righteous conclusions on questions relating to the ordinary affairs of life high intelligence and superior education play no essential part. Knowledge and wisdom are far from synonymous terms; and many there are that have got themselves a vast amount of knowledge

who have yet, with all their getting, never been able to understand their fellows, or humankind's ways, needs and sympathies. Any experienced lawyer knows that a jury taken from the streets and from shops is as likely to render a just verdict as is a jury of intellectuals, if not more so. Vox populi, vox Dei is an extremely well thought out proposition.

GET RID OF A COLD.

It is a serious mistake to think the common cold is a trifle. It leads to many grave diseases, especially to pneumonia and consumption. Who in his senses would say these are trifles.

How shall we avoid taking cold? To begin with lead the physiological life. Get up in good time; bathe well; eat three meals of wholesome food a day, and don't hurry about it. Be in the fresh air all the time, day and night; and get in the sunshine whenever you can, and it isn't too hot. Be very moderate in the use of alcohol and tobacco; better by far have nothing to do with them whatever. Better not smoke until you are twenty-one; and then maybe you won't care to.

Tea, the tipple of women, should be taken always freshly made, and in moderation.

Avoid dusty, damp or foul air; work only in rooms well-ventilated. Go to bed early and sleep at least eight hours. Wear suitable underclothes all the year around—thick in the winter, thin in the summer. The night wear must of course be changed from that of the day. Wear woolen socks in bed if the feet are cold.

Wear always warm footwear and stout, watertight shoes. Never get your feet wet. Many women won't wear rubbers or "arctics"; but all women should; and then they won't so often be going to doctors about pains in the back. "Put your chest protector on your feet." Cover your chest well, of course, but not enough to impede breathing, upon which good health depends.

Sleep with the windows open. However, avoid draughts; this can be done by means of screens or a clothes horse with a blanket over it.

Workers out of doors can digest coarser food than clerks; so the latter have to take exercise in the open air as much as possible. Pure air means the greatest possible amount of oxygen; and this means pure blood; and pure blood means a strong, virile constitution, capable of withstanding colds.

Both overeating and eating too much sugar and starches are habits tending to colds. A great many little children are constantly having colds in their noses; this is oftentimes not because they don't get enough to eat; but because they eat things not fit for children to eat.

Colds are catching; every now and then the papers tell of epidemics of colds. Then look out for the man who talks thick, and who is constantly sneezing, blowing his nose and making a general nuisance of himself. Sore throats should be treated until they are cured. Adenoids and inflamed tonsils are a fruitful soil for the catarrh germs; in children especially they ought to be removed.

Always breathe through the nose; there are some people who think the mouth is made for breathing, but they are misguided. The inside of the nose has spaces where the air is warmed before it is breathed into the lungs.

Never eat without having first washed the hands, and getting rid of possible influenza or pneumonia germs.

If you are afraid a cold is coming on douche your nose by means of a "nose cup" to be got in a drug store; and then gargle your mouth with the same solution—a half-teaspoonful common table salt to a tumblerful water, as hot as can be borne without scalding the nose and mouth.

THE American Association for Labor Legislation, which did much in the successful campaign for accident compensation, is now waging a war on industrial sickness; and this association would have sickness in-

surance made compulsory, with emphasis on medical care in order that it shall lead to a campaign of health conservation similar to the "safety first" movement resulting from accident compensation.

HUMAN JUNK SHOPS.

It appears that when anybody or anybody's baby living in and around Memphis, Tenn., swallows things they have no business swallowing, Dr. W. L. Simpson of that town is appealed to; since he is especially handy with the X-rays (by which foreign bodies are located in one's "innards"), the bronchoscope (by which such bodies in the windpipe and breathing tubes are reached), and the esophagoscope (by which such bodies in the gullet are extracted). Dr. Simpson has, in consequence, accumulated quite a collection, for example:

A beer check which a boy of three years tried to swallow. When he gets older he will know better. Generally speaking adults would rather swallow the beer than the check. An X-ray examination showed the check lodged, at the level of the collar bone. Dr. Simpson, with his little esophagoscope, extracted this which, our prohibitionist friends will learn with regret, was unimpaired as to the purpose it was in-

tended for. After it was extracted it was still good for one drink. The child had no further trouble—not up to the latest advices.

Harold L., aged seven months, thus early evinced a most deplorable propensity, in having tried to swallow a Brown Mule to-bacco tag. Under chloroform Dr. Simpson removed the tag. Let us hope this will be a lesson to Harold never again to have anything to do with tobacco.

(By the way, those youngsters in and around Memphis seem a pretty precocious lot.)

Baby Sledge, five years, swallowed a pin after which indiscretion he was unable to swallow food. "He acted as if he felt sick." But Dr. Simpson took that same esophagoscope in hand, with the usual brilliant result. Next day baby's swallowing apparatus was in its usual fine working order, with good digestion waiting on appetite, in the most comfortable way. Space prevents our detailing more on Dr. Simpson's interesting cases.

THE INDOOR-OUTDOOR BED.

About one-third of The Indoor-Outdoor Bed is concealed indoors under the seat of a davenport; and the rest is in an alcovelike addition extending outside some two and one-half feet. The dome-shaped wall of the alcove revolves; and by simply swinging it over to the inside, the occupant finds himself out in the open, protected by a heavy wire screen and adjustable storm curtain. By reversing the operation the bed is inside a warm room and the patient is free to get up without the fear of being chilled. And he has the night before undressed in the

comfort of his room and has then been able without exertion to sleep out in the open.

And in the event of an acute fever for which cold air is prescribed such as pneumonia, consideration is here had for the nurse, who need not thus be, for many hours attending her patient in the cold air, and can make all the changes in the bedding in the warm room, returning the patient at once to the cold air. And in the hot nights so depressing to the invalid, the indoor heat may be shut away; whilst by day the heat of outdoors can be avoided.

THE steamer rolled and pitched in the mountainous waves, and Algy was very seasick. "Deah boy," he groaned, "promise me you will send my remains to my people."

An hour passed. "Deah boy," feebly moaned Algy, "you needn't bother about sending my remains home—there won't be any."—Buffalo Commercial.



ORIGINAL ARTICLES.

THE HYGIENE OF INFANCY AND CHILDHOOD.

By Sidney V. Haas, M.D., President Lebanon Hospital, Etc., Etc.

A Lecture Given Under the Auspices of the Social Service Department of the Lebanon Hospital, New York.

THE subject to be discussed this evening is "The Hygiene of Infancy and Childhood."

Hygiene is that department of medical science and art which has to do with the preservation of health and the prevention of disease.

The hygiene of the infant should really begin before he is born. The offspring of unhealthy parents are likely to be weak. The children of very young, or very old parents are apt to be of poor type.

There is one disease, syphilis, which has a special importance at this stage. It is so readily transmitted to the infant by a parent who, owing to the absence of symptoms, imagines himself cured of the disease, and because the treatment of the mother by the administration of potassium iodide can insure the birth of a healthy child, who otherwise might bear the burden of the disease for life, which in severe cases is usually short.

At the time of birth, another venereal disease, gonorrhœa, assumes appalling importance, not because it is transmitted to the infant, to perhaps present manifestations later; but because in the very act of birth the eyes may become infected and blindness ensue. Fifty per cent. of all the blindness in the world is due to this infection, at this time. This can be absolutely prevented by instilling a few drops of a 2 per cent. solution of nitrate of silver into each eye, once, immediately after the baby is born. Many communities have made a law penalizing the physician or midwife who neglects this measure; disregarding the fact that neither parent may ever have had the disease.

FOOD.

There is only one perfect food for the new born human infant, breast milk. Other

foods may make a baby gain in weight and grow; but they lack certain ingredients, impalpable in the present state of our knowledge, which have to do with resistance to disease. Many more breast fed babies survive than those artificially fed.

If breast milk cannot be obtained then a mixture of cow's milk is to be used; and other things only if cow's milk cannot be made to agree.

The milk should be of the kind called certified, which is milk produced in the cleanest possible way, from cows who are entirely healthy. If this is not available, or too costly then milk should be pasteurized, that is, heated to 157 degrees for 30 minutes. The sterilization of bottles and nipples by boiling must be practised. If these facts are borne in mind, then there can be no gastro-intestinal infection in the infant, although an indigestion may occur from inability to assimilate properly, milk mixtures.

Scurvy is a painful, sometimes serious condition, produced in children after the sixth month, by withholding fresh fruits or vegetables. It can never occur where fresh foods are given.

The intervals between feedings, the kind of food, all are important.

Not all individuals have the power to digest and assimilate in the same degree.

Thus milk, although perfect food for many, acts as a poison to some.

In the same way eggs are a distinct poison in some cases. These peculiar effects are due to certain constituents of the food usually the fat; but sugars, starches or proteids may cause the trouble.

This is important to bear in mind since it is the general belief that milk and eggs (taking them as examples of perfect food) should agree with all children.

After the sixth month it is wise to offer solid food first in the form of strained gruel, or crust of bread; later, vegetables, fruit and meat juice.

After one year an attempt should be made to feed food in a coarse state, thus: finely chopped meat in place of meat juice, gruel not strained, though always well cooked and thinned out with milk or water, crusts, fruits, etc.

The reason for this is twofold. First, fluid food does not give the jaws and teeth work to do, therefore, they develop badly. Second, milk given in very large quantities removes the appetite for other foods, and since milk is very low in iron content, an anæmia is very apt to follow the prolonged exclusive use of milk, especially in later infancy, and childhood.

Sugars in excess in some children may produce a tendency to eczema, and catarrhal conditions, as seen in adenoids, enlarged tonsils, frequent head colds, recurring bronchitis and even asthma.

Fats are capable of doing the same thing, and besides produce drowsy or convulsive states which are spoken of as acid poisoning.

Starches in excess may produce a peculiar state in which the children lack appetite, are peevish, pale, and fail to progress. The starches presented in the form of white or wheat bread, and potatoes are apt to induce constipation. They are low in mineral content and for this reason coarse breads, rye, whole wheat, etc., should be used in place of white bread; and potatoes should be used only in moderate amount.

Proteids or the meat element of foods are less apt to give trouble than any of the foregoing; but excess of meat may also produce irritability and other symptoms.

Stimulants—alcohol, coffee and tea—should not be used. The latter may be of value at times when used in very small quantities as a flavoring for milk.

Clear broths may properly be referred to as stimulants, and are of value in sickness. In health, only when they contain vegetables, cereals or other things, have they sufficient food value to warrant their use. A desirable diet in childhood should be varied, and, except for special reasons, should contain milk or cocoa, cereals, meat or eggs, vegetables, fruits, thick soups, coarse breads and butter. The bowels should be moved at least once daily.

CLOTHING.

The question of clothing the infant should create no difficulties. As a matter of fact one of the greatest causes of discomfort to the infant lies here.

What is the correct dress for infants? The answer is, dress which will keep them comfortably warm in cold weather, and cool as possible in warm weather.

In the winter a warm undershirt with long sleeves next to the skin, diapers, woollen stockings, a flannel slip, and outside of this a muslin slip, for the house, with the addition of a knitted sweater, warm coat and bonnet for the open air. When the weather is exceedingly cold, heavier outer wraps; when milder weather prevails, lighter ones,

In the summer, if the weather is hot, diapers, and a muslin slip are proper dress. It is impossible to dress a child too lightly on a hot day.

The abdominal band, without which babies are supposed to suffer from intestinal trouble. After the navel has healed it is no longer required.

When should shoes be first worn? Excepting the woollen bootees which are used for warmth, it is wise to omit shoes until the baby walks. He will surely walk weeks sooner if his naked feet can feel the ground while he is learning. As soon as possible it is well to use shoes with heels. The clothing of older children must not cramp them. No tight bands around the neck or waist, no straps to pull them into faulty posture. The same general rule applies here as in younger children; and the amount and character of the clothing to the condition of the weather. The weight of underwear and outer clothing may be changed from day to day, with change of weather and such change may even be desirable in the course of a single day.

EXERCISE.

In early infancy exercise is obtained by crying, twisting, turning, and in the course of feeding and manipulation; as soon as possible, usually about the eighth week, it is wise to allow the baby to lie naked for one-quarter of an hour daily so that, untrammelled, he may exercise his limbs so far as he is able.

Later, when an attempt is made to sit up, it should be encouraged, and the same hold true if he attempts later to stand and walk.

The back and limbs are strong enough when they can accomplish these feats.

BATHING.

A child should be bathed daily in water at temperature of the body. The time is to be convenient to the mother, and if in early infancy this bath is followed by pouring over the head, chest and back, water a few degrees colder, then the bath, and the temperature of this water lowered every few days, before the baby is many months old it will be found that he enjoys water as cold as it runs from the faucet, after the tepid bath. The bath should be kept up through childhood, until it becomes a fixed habit.

Sleep plays a most important part in infancy, when a child is normally awake, only to eat or to be made comfortable. As the months go by, there is a somewhat longer waking period. It is well to try to maintain the habit of sleeping in the daytime through the early years of childhood.

The causes of disturbed sleep are hunger, overfeeding, improper feeding, keeping the infant too warmly or too lightly covered, too much excitement just before bedtime.

The proper dress for the night after the first month or two is a single long gown, muslin in hot weather, knitted, canton flannel or flannel in cold weather. Underwear is undesirable.

AIR AND LIGHT.

are no less important to the infant, and young child than to the young plant.

There is no such thing as giving a child too much of them.

This does not mean that a child should be out when the mercury is below zero, or when the wind is blowing a gale. On the contrary, in the city at least, with its dust-laden, infected streets, a very distinct contraindication to the open, is a dusty, windy day, with its tendency to produce infection. But cold and snow and rain are no reasons for depriving the children of the open air. In the house the windows should always be open when possible, the children being always properly clad. A cold is not produced by open windows; very much more likely are they to occur if windows are kept closed. Draughts should be, and are easily avoided.

Light, daylight and sunlight are not at all appreciated and yet it is possible for the trained observer to make a diagnosis of insufficient exposure to light, by most characteristic symptoms—head nodding, nystagmus or oscillation of the eyeballs, and pallor.

For example, if a child sleeps either in the house or in the street, the blinds should house or in the street, the blinds should be be raised in the former, the hood of the carriage should be drawn as far as possible in the latter instance to admit the maximum of light.

This does not mean that it is well to allow the blinding sunlight to fall into a child's eyes; it is only necessary to turn the head of the infant toward the source of light to prevent this.

MENTAL HYGIENE.

The mental hygiene of the child does not always receive the attention it deserves. Diversion is almost as necessary as food to the full development of children. Children are constantly harassed by guardians who, in their watchfulness, interfere with many entirely harmless and normal activities on the part of children.

A safe rule to follow is not to interfere with children so long as they do nothing that endangers either themselves or objects and persons around them. In this way they will develop best.

Remember that children (young children) rarely lie. The lies they seem to tell are the

products of their imagination, and often represent dream experiences which they are unable to differentiate from the real. All children are fearful and to punish them because they are unable to overcome a fear is a grave error; help them to understand, and appreciate and protect them from repetition of their fearsome experience and it will finally fade away. If this is not done, it may grow and finally become a fixed idea.

Temper in the child is always the expression of rebellion against that which it considers an injustice.

In some instances the child is right, and injustice is being done to it. Mostly, however, the false reasoning of childhood produces the sense of oppression which is, of course, unjustified. Punishment in these instances is worse than useless; instead of making less the childish tendency to outbursts of temper; by making him more resentful it increases the tendency. The solution of the problem is to avoid giving orders to the child unless inspiration for proper conduct, and then try to convince him, if possible, of the necessity for the attitude you assume.

It is surprising how much less frequent these outbursts may become, without in any way impairing the proper training.

Training for correct habits can be begun in early infancy. It is not uncommon to find an infant have stool at a stated time in a receptable the size of a soap dish at the age of three months. There is, however, great variation in the response of infants to training.

ing.

There are no lazy children. As time goes on, and our knowledge increases, we find that the lazy child is a sick child; not necessarily with fever and all that goes with our conception of disease. Such a child may be suffering from obscure disease such as an undersecretion of thyroid gland or of one of several other glands in the body.

He may be suffering from a chronic poisoning either from the character of the food, as already referred to, or from too much or too little food. To chronic constipation; to the absorption of pus from some hidden source as the tonsils, sinuses, or carious teeth. Or there may exist some defect in vision or other sensory function which may produce the eppearance of laziness or stupidity.

Adenoids are also sometimes responsible for this condition.

One of the important causes of trouble in rhildhood is caries of the teeth. This may

lead to loss of appetite and an intense anamia, which clears up remarkably with the filling or extraction of the diseased teeth.

The mouth and nose are the entrance point of most of the infections.

Formerly it was the custom to wash out the baby's mouth before and after feeding. This procedure has been abandoned since it was found that injury to the mucous membrane invited infection instead of repelling it. Disease is only contracted by contact, practically never through an intermediary. Inhalation of infected dust, and contact of the mucous membrane of the mouth with infected utensils such as cups, glasses, and the like. Contact by kissing or passing food about, each one taking a bite. These are the usual methods by which diseases are contracted.

It is well to remember that the most contagious period of contagious diseases is just before and at the time of the eruption, and there is rarely any further danger when nasal or ear discharges or sore throat have disappeared.

The hygiene of childhood includes vaccination—vaccination against small-pox. and against typhoid fever. Injection of diphtheria anti-toxine when a child has been exposed to the disease

exposed to the disease.

Before closing it may be well to call attention to certain lay medical traditions which like evil thoughts will not down, and the dear old grandmothers just know that the modern physician who does not practise and preach them is not in any sense to be trusted.

1. That when the baby begins to droot

he is teething.

As a matter of fact the salivary glands become active at the third month and practically all babies drool at this time. Teething rarely begins before the sixth month.

2. That the second summer is more dan-

gerous than the first.

This is, of course, not true; but had its origin in the fact that in former times babies were chiefly breast fed the first summer, and artificially the second. The art of feeding and the quality of the milk were so much inferior that sickness and death were more frequent in the second summer.

3. In some way the idea became prevalent that a baby born at the seventh month was more likely to live than the one born at the eighth month. This is also untrue.

4. That bow legs are due to too early attempts at walking. As a matter of fact this condition is the result of rickets which

is a disease of improper nourishment and hygiene.

- 5. That crying will induce rupture. If this were true all babies would be ruptured. Crying, of course, accentuates, and thereby is often the means of calling attention to an existing rupture.
- 6. Washing the hair or bathing is not to be thought of for a moment in case of sickness, especially those contagious diseases with skin manifestations.

As a matter of fact bathing is one of the most valuable therapeutic procedures we possess in these conditions.

7. That under no circumstances must a ray of light fall upon a child suffering from measles; else it will be blinded.

Occasionally the eyes in measles are so much inflamed that the light is painful, and the light entering the room should be subdued; but in the vast majority of cases there is no need for this. The room, whenever possible, should be kept as bright and cheery as any sick room.

8. That feeding banana to an infant is

little short of murder.

The truth is that the overripe banana is one of the fruits best tolerated by infants, and more desirable than most because available when other fruits are scarce, and because it is the only fruit having real food value.

In conclusion: It is well to remember that babies were made before houses, and that the only costume of the first babies was that which nature provided. That all outdoors is the baby's natural habitat. That air, light and water are natural to it. That after the suckling stage is past, foods not too refined are desirable.

666 West End Avenue, New York.

DETERMINISM.

DETERMINISM is a hypothesis with which the sciences cannot dispense, and which daily leads to new advances. Experience shows us that facts succeed each other in regular order, but since it deals only with a small piece of the world and with a short period of time, we cannot tell whether the order in question is absolutely uniform, and whether the succession of the antecedent, which we call the cause, and of the consequent which we call the effect, is necessary in the metaphysical sense. It is even conceivable that there should be in, in certain stellar regions, an entire absence of laws of succession, and that absolute indeterminism should prevail there. may, without proving untrue to the principles of positivism, assume an intelligent

and free Creator. We can never reach the absolute, the relative alone belongs to us. We consequently proceed as though the law established by observation and induction were immutable, as though the order of facts were constant, as though the determinism of phenomena were universal That is to say, we invariand absolute. ably proceed like the positive and experimental sciences, which have no need to trouble themselves about the absolute and first causes; we merely wish to substitute positive science for metaphysics, preferring to a science that calls itself absolute, and that is in reality hollow and barren, a science that knows it is relative, but gradually brings nature under the sway of man and his industry, a science that is useful, and the source of all progress.

THERE is no such thing as a distinct criminal type, and a careful study of anthropology does not justify the conclusion that there is. Our prison population, made up as it is of the weaklings of society—the flotsam and jetsam—who are incapable of and unable to maintain their places in the competitive struggle for existence, are not criminals in the deterministic sense, but they are necessarily of that diathesis from which we may expect, to a greater or less degree, antisocial attitudes.—D. C. Peyton, M. D., Jour. Ind. State Med. Assn.

The sanitary conditions of the places of employment have a distinct and direct bearing in the causation of disease through poor general conditions, poor lighting, heating and ventilation, overcrowding, excessive humidity and special conditions of deleterious gases, fumes, dust, poisons and the like. These conditions are so obviously causing disease and are so prevalent in so many industries and causing so much direct injury to the workers that the general public have come to consider these as the full extent of the damages for which industrial conditions are responsible.—B. S. Warren in Pub. Health Rep.

INTERESTING OCCUPATION FOR THE CONVALESCENT.

By CHARLES CRISTADORO, POINT LOMA, CAL.

IF there be one retarding element in sickness more hurtful than all else, it is introspection. I do not believe any physician, surgeon or experienced nurse will disagree with me. Given two patients (imaginary, of course) of similar temperaments, constitutions, ailments, etc. To one give interesting work of some kind, occupation that gives hand or brain employment. To the other give nothing but the environment of his snow-white walls and the furniture of the room, or, if in a ward, the spectacle to dwell upon of human misery de facto.

Of the two convalescents, which one will leave the sick room first? Just the difference between intro and extrospection.

The skilled conversationalist will ascertain the subjects in which his caller is most interested and guide the conversation along those lines, and not a moment lags. An invalid and a shut-in myself, I've tried that over and over again and gratification always follows. A few questions adroitly put and the rest is easy even when a caller comes for the first time.

A nurse to the manor born, experienced and tactful, will do the same thing: ascertain what the "line" of her patient is and ask opportune questions—and naturally get the patient interested, alert, alive!

Medicine and surgery are, respectively, inexact and exact sciences, but nursing comes into the field of scientific psychology.

Let me instance, and it is a good example because it is my own case and my statements are based otherwise than on hearsay or casual observation.

I spent 100 days in a hospital recovering from an operation where the chances were 1,000 to 1 against me. If I did not die on the table then "the nurse did not live that could carry me through." To all my friends read the legend above the operating room door, "He now entering here leaves all hope behind."

Lack of apprehension or a spirit, more exactly expressed, of "don't care," enabled

me to joke with the solemn, whiteenshrouded nurses who with wondering eyes gazed upon me, rattling unconcernedly and good humoredly on until the ether put an end to my loquacity. They put the best nurse in the hospital upon my case, a graduate from an eastern hospital taking as it were a self-imposed post-graduate course in getting acquainted with the ways of people and physicians in her new environment.

I came out of the ether in my cot in the room and I believe the first thing I did was to genially compliment the nurse upon the air she was gently humming, which started her smiling.

Now to make a very, very long story very, very short, every morning at 7 o'clock she would look into my room and "size me up." She seemed to know just what kind of a night I had passed, and when, an hour later, the bedside nursing table was wheeled into my room, she was "on the job" in more senses than one. All smiles and quiet laughter and ready with some subtle joke that would "get a rise" out of me if I were introspective and depressed, and from a continuous condition of dejection I was forced into one of joviality and extrospection. And the long and tedious and dangerous ordeal was gone through with, morning after morning and she left me in good spirits for the rest of the day.

If, on the other hand, when she opened the door of my room, she found me bright and I gave her a cheery, welcoming "good morning," when my time came she went about her work as a "machine nurse," as sober as the proverbial judge or crusty doctor. I didn't need diverting stimulation along the lines of introspection prevention, and she let me prattle along. I needed no stimulation. And people wondered, and wonder yet, how I pulled through and lived to tell the tale. How much had the psychological influence of that nurse to do with it? I claim to this day that the surgical part of my case was but 5 per cent. incidental, that

95 per cent. of my cure was the nursing, along the lines of introspection prevention.

Amusing and interesting, diverting and exalting the patient is worth a ton of medicine and a score of hypodermics. And there follows no reaction.

And the moment I could be braced up in bed pencil and scratch-block were given me, and then I was happy indeed. I could write to my friends and not have to dictate letters to my nurse. How much my pencil had to do with my cure I do not know, but I do know that the three years I have so far lived my pen has been my hypodermic, my nursing still going on and to go on as long as I live, by the best of all trained and untrained "practical" nurses, my good wife. She was in the hospital and had a cot in my room and in the battle to keep me on this earth she too played a great part. And the introspection that meant death to me was fought tooth and nail.

But it was noticed that I gained great headway when I was allowed to sit up and write, when I had interesting occupation. I repeat it, interesting occupation.

I have often thought that had I a boy patient (with a surgical injury) convalescing, that the moment he could sit up in bed I would give him a jack-knive and a shingle. Untidy hospital practice to have to clean up the shavings that boy would make of course, but note the effect upon the boy! He's happily occupied and that penknife is his hypodermic and the knitting bone somehow did not hurt half so bad when whittling!

That one illustration covers the whole field and, when possible to be put in practice, is an adjunct along the line of convalescence the value of which is beyond compare. Absorbing work. Interesting, diverting occupation for the invalid. Stories told to the sick child that takes him afield in the sunshine, where he hears the bees,

A Golden Rule.—The first rule, then, for a good style is that the author should have something to say; nay, that is in itself almost all that is necessary.—Schopenhauer.

sees the birds, watches the limpid fishladen brook and smells the wild flowers and hears the breezes whispering through the swaying boughs. Diversion supreme for that child, an invigorating, refreshing tonic for its mind.

Had I aught to do with the direction of the Sage Foundation Fund I would build a lath-house, either upon the roof or in the yard of hospitals. A time comes when a patient can be transferred by stretcher to a cot in the open, on the roof or upon the porch.

In California, we have the lath-house that tempers the breeze from the ocean and moderates the sun's rays, the opposite of the enclosed glass and iron green-house. this enclosure (made of a few two by fours and a few bundles of lath) blooming plants and mantling ferns are grown to luxuriant perfection. Boxes filled with earth and hanging baskets are cheaply employed. You wheel an invalid into an enclosure of this kind and the environment is as unto a para-Refreshing, diverting, interesting, pleasing, exalting. My days are spent in such an enclosure, day after day, and I speak knowingly. The plants take on a new growth day by day, bees come and delve into the blossoms, and humming birds flit about, and passing through a sunbeam send out shafts of reflected color that would put a hundred rainbows to the blush.

A very few dollars would construct and equip such a retreat and the untold pleasure and good such a refuge would exert upon a convalescent would be difficult to estimate. It's an interesting, almost an interminable subject, this diversion of a convalescent, but one well worthy of the attention of the managers of hospitals and sanitariums in the land, and as one sentenced to an invalid's chair and a condition of continuous convalescence I make these suggestions hoping that they may fall upon fertile soil.

The Quick and the Dead.—There is a dead medical literature, and there is a live one. The dead is not all ancient, the live is not all modern.—Oliver Wendell Holmes.

MINING CASUALTIES AND DISEASES.

A coal strike is singularly pervasive in its baneful influences; and unusually provocative of discomfort and even suffering among many not immediately concerned as employer or laborer. Civilization is impossible without heat, lacking which we must revert to savagery. Cooking, the comfort of the home, lighting, the infinite variety of things constituting the luxuries, the decencies, the culture, that in the aggregate mean civilization, cannot be conjured up without It is fire which for the most part makes machinery go, and which produces electricity. And it is by means of the coal dug out of the earth that this form of energy is almost entirely obtained. The mining industry adds every year two billion dollars to the wealth of these United States.

One among the sundry reasons for the dissatisfaction which prompts the miner to strike, lies in the unusual hazard of death-dealing accidents which he must meet, and in the conditions conducive to disease that are peculiar to his occupation.

It would be an unusual "thriller" in fiction that could vie in interest with the simple statement of facts in the case of Joseph Clary, a miner, who was entombed in a drift by the collapse of part of a mine roof. Water began to rise inside the imprisoning walls. Without was Clary's father, working desperately, heading the rescuers; whilst the mine pumps were pushed to their fullest capacity to check the rise of the water, which was known to be gaining on them. At home the sick mother was waiting constantly for word of this imprisoned son.

Meanwhile Clary slept the first day, at intervals, and speculated how long it would be before the rising tide would become dangerous. The second day he heard the noise of the drill, behind which the rescuers were working. The third day he spent in reading, by the light of an electric lamp, newspaper accounts of his own peril, of the work of rescue, and in conversation with his own mother over the telephone. Food,

drink, newspapers, electric light and telephone had been lowered to him in the narrow passage-way made by the drill into the blocked-up drift; here was beautifully exemplified modern improvement in the process of relieving imprisoned miners. Yet while this hero of fact rather than of fiction was talking by phone with his mother, the rising water swept away the crumbling ledge of rock on which he stood; and he collapsed when finally the rescuers shoveled their way to him.

Now, this case of Joseph Clary is simply trivial by comparison with some mining accidents that have occurred in recent vears. Here is one which for horror rather puts in the shade that episode in Ben Hur twenty centuries ago, when the trireme was sunk, and with it most of the galley slaves helplessly chained at their oars. On April 8th, 1911, at Banner, Alabama, soon after one hundred and sixty-five convicts had gone into the mines, there was an explosion over a mile under ground. One hundred and ten convicts and five free laborers, including the heroic convict foreman, O. W. Spreadling, all met death. It seems the explosion was of powder and dust; and it is believed not to have sent immediate destruction through the mines, but, by smashing a ventilation fan, to have allowed black damp to accumulate.

These convicts, mostly negroes, had been hired from a dozen counties in Alabama. It is related that upon the explosion several convicts who had been in the mines before understood that if they would live they must run for it; and they headed for the mouth of the mine. And in this race with death forty-five managed to get out. Rescue parties were immediately at work; and they discerned convicts stumbling all over the place, and dropping as they were downed by the foul air. No relief could be given, for the rescuers, fearing they would themselves be overcome, retraced their steps to save their own lives.

But let no one imagine relief parties lack-

ing in heroism. Immediately upon an explosion comes a leader's call for volunteers: 'I don't want married men—there are enough of these dead in the pit already. You know the dangers. I will lead." And there never was greater heroism in all time than that with which the response is made. In the Hanna, Wyoming, explosion twenty men were killed in the effort to save twice that number of their "buddies"; and within the minute there were another score to take the place of the first volunteers. Think of a mine boss, three minutes after an explosion, groping his way on hands and knees, his head swathed in cloths so that he could endure the scorching heat, with a rope around his waist, in absolute darkness (for no lamp must be lit for fear of another explosion), pulling out eight unconscious men one after another; he and his find being dragged together over rocks, timbers and burning debris; coming out several times with clothes afire, and stopping only when himself overcome by the after-damp. Yet others at once took his place, into that seething pit, where were awful noises, groans of wounded men, screaming of Thus was every man frenzied mules. whose heart was beating when found, carried out: one impaled and writhing on the sharp end of a broken plank, the point sticking a good three inches through his body; another blinded and mad with burns and with broken bones.

Even more dreadful than such disasters have been death by after-damp or by starvation. Men have lived a fortnight and more by eating candles, rats, oiled paper, soap, miner's oil, and have come out with hair grown white. After one explosion the bodies of six little trappers, all under twelve, were found gathered behind a door which led to safety, and which had

been blocked by fallen roof.

Such are incidents, the like of which we have all been coming upon with painful frequency in our morning newspapers. We read how upon a mine explosion flames shoot high in the air; men are trapped like rats in a hole; how rescue parties are powerless to save them; how, if the explosion has not immediately done its human butchery, death by fire remains, and is perhaps more merciful than the slow starvation and the thirst which ends many a life weeping, frantic and bereft women and fatherless children gather about the pit-mouth. And what pitiless aftermath, when each such horror deprives many scores of families of their breadwinners, and makes them altogether and

hopelessly destitute.

In America these mine accidents seem unusually fruitful. "We kill every year more than all the rest of the world beside.' There are now 800,000 coal miners working in the privately owned coal mines in the Under State regulation United States. 30,000 coal miners have been killed and 80,000 injured during the last twenty years. In advocating that the Federal Government safeguard the life of the miner (by an interstate mining commission) as it now does that of the railway worker, Dr. John R. Haynes has stated that national regulation in European coal mines has enormously reduced the percentage of fatalities in the last fifteen years.

In the one year 1910 more than 10,000 miners were killed, mostly in Pennsylvania, whilst 250,000,000 tons of coal were wasted by reason of lax methods of mine working. A single fire that has been burning near Summit Hill, Pa., for fifty-one years is estimated to have destroyed \$25,000,000 worth of coal.

There is now a most efficient Federal Bureau of Mines, at Washington, D. C., of which Dr. Joseph A. Holmes is director; this bureau reports to the Secretary of the Interior. Dr. Holmes has set forth the following factors as conducive to explosions:

1. The character of explosives used in certain mines.

2. The quantity of the explosives which may be used in the presence of gas and dust.

3. The quality of the gas and its dangerous percentages.

4. The nature, extent and insulation of electric currents used.

5. The kind and condition of the miner's amps.

6. Probable underground fissures, determinable by the study of strata from which gas may burst out.

7. The character of the coal dust.

To these factors must be added the carelessness or perversity of individual miners. Many men die by reason of one man's possible mistake or untoward conduct. Every man entering a mine, it seems, takes in his hand not only his own life, but also those of his fellows—his "buddies." Seemingly adequate precautions and careful inspections are oftentimes nullified by the miner's disregard of danger. Men have been seen pouring powder into cartridges from a twenty-five pound can, with their open lamp dripping sparks all about. Thus, just when the State officer stepped from the shaft of a Pennsylvania mine, after giving it a clean bill of health, an explosion in that same mine destroyed 125 men.

It is oftentimes difficult to get miners to observe the precautions prescribed and essential for their own safety. They break or misuse their safety lamps, or surreptitiously use naked flames in gaseous mines for lighting their pipes or other purposes. Despite admonitions and penalties, there are always those who will imperil their own lives and those of their fellows.

There remains to be considered an element of danger which investigation and the application of scientific knowledge is now steadily minimizing—"those forces and processes of nature which will now and then malignly triumph over all the precautions of science, and cause catastrophes to which no term can be better employed than 'acts of God'." It is certain, however, that the superb work of Dr. Holmes and of his able associates in the United States Bureau of Mines is clearing up much of the mystery of mine disasters; is more and more putting responsibility upon human shoulders, and giving less and less occasion for objurgating Providence.

Among the achievements thus far of this excellent Bureau are: Investigations concerning mine gases and dusts; permissible explosives for coal miners; the escape of gas from coal; coal-dust explosions; coalmine accidents. Instruction how parties formed to rescue entombed men are to use oxygen helmets; and as to what first aid parties must do. Methods of mining are investigated, with especial reference to the prevention of accidents and the welfare of miners. Owners and their employees are educated in the proper use of explosives, electricity, hoists and other paraphernalia; in the equipment necessary to driving shafts and tunnels; and to taking An important out coal and minerals. digest has been prepared of the laws of the States and of foreign nations regulating the operation of mines. On these subjects and on much else that is vital to the miner, important papers, containing detailed statements and advice, have been printed; and these are at the disposal of any citizen who will apply for them by letter. Especially important to mine operatives should be the

The electrical section of the Bureau of Mines is particularly concerned with the problems of safeguarding life and property

circular on the Prevention of Mine Ex-

plosions.

from the dangers attending the underground use of electricity. Its working headquarters are at Pittsburgh, Pa., where also is the mining experiment station; and this section heartily urges co-operation in its work by mine owners, operators, inspectors and State mining departments.

The Bureau finds that most mine operators, if not all of them, would be willing to install safer electrical equipment if the market could supply it. "Some of the manufacturers are now developing motors and switches designed to be explosion proof, and the Bureau of Mines has always found manufacturers of electrical apparatus ready to co-operate in its electrical investigations." There are three principal dangers from the use of electrical equipment in mines: from electric shock; from explosions caused by electricity; and from fir started by electricity.

The practical solution of the problem of safeguarding the use of electricity in mines calls for the adoption of protective measures and of devices that are simple, rugged, "fool proof," and as inexpensive as pos-At the same time both measure and devices must be entirely effective, or they will become a menace. There is a field for devices reducing the danger of shock from the trolley wire; and for devices preventing the ignition of gas on motors, switches and other circuit opening apparatus. There is demand for acid-proof markets. terial for insulating wires and cables; and there is room for improvement in the methods of installing electrical equipment underground.

The Government, through the agency of the Mines Experiment Station, is also cooperating with the manufacturers of fuses. Those who desire to make standard fuses have been asked to send samples to Pittsburgh, where they could be tried out thoroughly. A list of fuses which have passed certain requirements have been supplied to State mine inspectors, and made public in such other manner as has been considered desirable.

Fire damp, in its chemical composition, and in its properties, is akin to methane (marsh gas), which produces will-o'-the-wisp, and which forms about 75 per cent of the mine composition. A safety lamp will detect fire damp in a mixture of one part to twenty of air; one sees inside the gauze a halo of blue light, which may grow until it fills the lamp. More than one part of fire damp to ten of air is most dangerous and explosive; until it gets to an

equal mixture, when lack of oxygen prevents combustion.

Į.

-

5

7

7.

--

3

Ξ.

_

٠.

--

.

=

五日於西西部以本

How coal dust explosions come about has not been precisely determined; they are the most frequent cause of serious disaster. Dry coal dust, blown into the air and lighted, perhaps by a "windy shot," will explode; the rush of air in advance raises more dust and the force increases until a wet place or the open air is struck. Mine explosions are caused by the admission of - fire damp by a defective safety lamp, or la a naked light, or by a flame from a shot, or by the explosion of air impregnated with fine particles of coal dust. A "windy shot" or a badly fired blast may have sufficient force to kill all the men in an entry; and it is generally the cause of dust explosions, which, with the consequent roof-falling, are responsible for most violent deaths among miners.

When powder used in mines for blasting is "tamped"—that is, placed too lightly in its nest—it flares and becomes a windy shot, a long flame leaping straight out from "the face"; thus are gas and coal dust ignited, a mine explosion resulting. It is noteworthy that in Belgium much disaster has been avoided by the mutual agreement between operators and miners to eliminate men known to be reckless, from positions of danger. In consequence it would seem that there has been no explosion during seventeen years (up to 1908) in the most dangerous of the Belgian mines.

Experiments are now making for the substitution of water instead of powder in mine blasting. The water method should be infinitely less dangerous. Herr Carl Meissner, the German mining official, knowing of an explosion in mines where there were no "gas pockets," became convinced that while the gas might not be a part of the coal, it was nevertheless in the coal seam, or perhaps in the pores of the coal. He believed that if water could be poured into the pores of the coal it would drive out the gas. He had a long nozzle built to fit exactly into a hole bored by the miners for the insertion of their powder. A very small quantity of water—only a few quarts having been injected, the gas was driven out with a hissing sound; it was then found that by inserting just a little more water the coal would be sufficiently cracked and broken for a blow of the pick to bring it tumbling down. One would think it would be feasible to introduce water into fissures in this way in the late

Fall; if this water were to become ice during the Winter its well-known irresistible property of expansion in changing from its fluid state should disintegrate enormous masses.

Germany is reported to have excluded powder from its mines; and is now mining coal by water on a large scale. Possibly it foresaw powder could be used more picturesquely some other way. Mr. Carl Scholz, president of the Rock Island Coal Mining Company, is planning this method for his mines in Indiana, Illinois and Oklahoma. The mines in Alabama and in West Virginia, and in British Columbia are now being extensively worked by water instead of by powder.

Of peculiar medical interest is the character and the relative amount of dust This factor has much to do in mines. The lungs of with disease in miners. miners examined on autopsy exhibit to an amazing degree the lesion called anthracosis, which results from the inhalation of coal dust. The knife grits as it cuts such a lung, and the cut surface is grey-black, exuding minute particles of coal; one is amazed to find how generally such a lung is thus impregnated, and wonders how miners survive so long as they do, with so much respiration area involved and put out of action.

Strangely enough, however, miners suffer less from tuberculosis (consumption) than any other class of laborers. The clergy even, suffer more than do miners; and among all occupations only farmers, bankers, brokers and company officials suffer less. But 6.4 per cent. of our miners die of consumption; and this is astonishing in an occupation so insalubrious.

However, this observation obtains only regarding wet mining; and several reasons have been forthcoming for such comparative immunity from a disease which. by and large, destroys every third or fourth white life in civilization, and every other adult colored life. The explanation is offered that miners are picked men to begin with, the nature of the occupation precluding all of poor body; that there is some antiseptic property in the coal dust, which the miner inhales in such huge amounts; that in "wet" mining the point of saturation is so nearly reached as to make impossible the dessication and dissemination through the atmosphere of the tubercle bacillus. which is the specific germ of consumption.

None of these explanations is altogether explanatory. The last might do well enough were it not for the fact that the air in mines is, at any rate in winter, fairly dry (when, by the way, most explosions occur). In summer, on the other hand, the air being relatively cooler than the air outside, the moisture is precipitated, and the mine dust is damp or wet.

In distinctly dry mining the consumption mortality is very high, as is the case in most dust-evolving occupations. In England the tuberculosis mortality is very great among tin, copper and lead miners—whilst coal miners show varying rates in different coal fields, but all low.

A death rate of 70 per 1,000 has been

cited among white rock drill miners of the average age of 35, in the South African gold fields, as against 6.3 per 1,000 among English coal miners—a mortality difference certainly due to lack of preventive measures against dust-dissemination. So terrible have been the ravages of consumption among these African miners that the Government has been considering a bill for the compensation of these thus incapacitated, and for the benefit of their dependants. With the humane purpose in view of converting dry into wet mining, by means of jets and sprays, the Transvaal Chamber of Mines held an exhibition in 1903, in which were demonstrated, among other machines, the water-drill of Leyner, and the apparatus of Britten, which latter, whilst laying the dust, disposes also of the nitrous fumes generated in the blasting.

WHAT SHOULD BE KNOWN ABOUT CANCER. IN EARLY TREAT-MENT LIES THE HOPE OF CURE.

THE NATURE OF CANCER.

Its Local Beginning: Cancer is almost invariably at first a local disease.

It is easily cured if promptly recognized and at once removed by competent treatment.

It is practically always incurable in its later stages.

The Danger Signs: The disease usually begins in some unhealthy spot or some point of local irritation.

In external cancer there is something to be seen or felt, such as a wart, a mole, a lump or scab, or an unhealed wound or sore. Pain is rarely present.

Cancer inside the body is often recognized by symptoms before a lump can be seen or felt. Persistent indigestion, with loss of weight and change of color, is always especially suspicious.

Persistent abnormal discharge from any part of the body should arouse the suspicion of cancer, particularly if the discharge is bloody. The early and hopeful stages of cancer are usually painless.

THE CURE OF CANCER.

What You Should Do: Fear the beginning of cancer.

Never be afraid to know the truth.

Any painless lump or sore appearing upon your body should be examined by your physician.

By the time a cancer has become painful the best chance for its cure has passed

But even a painful cancer can be removed permanently if it has not extended too far beyond the place where it began.

Seek Early Examination: If you notice that a wart, mole or other "mark" begins to change in appearance or to show signs of irritation go to a physician and have it completely removed. Do not wait until you are sure it is cancerous.

All lumps in the breast should be examined. In women the normal change of life does not lead to increased flowing which is always suspicious, as is the return of flowing after it has stopped.

Medicine Useless: Medicine which relieves pain does not have any effect upon the disease itself; it simply produces a period of freedom from discomfort and therefore delays the proper treatment.

RADIUM AND CANCER.

Limitations of Radium. According to the most authoritative opinion the curative effects of radium are practically limited to-day to superficial cancers of the skin, and to superficial growths of mucous membranes and certain deeper lying tumors of bone, etc., which are not very malignant. Radium has probably been shown to exert a definitely curative effect on certain of these cases, while the disease is still local and in the early stages.

Radium definitely relieves suffering when used in the advanced stages of deeperseated cancers; but in those cases it improves only the visible or tangible manifestations and exerts no effect upon the disseminated disease as a whole. It is believed that there is as yet no proof that radium has finally cured any case of advanced and disseminated cancer.

Radium Fakes: The public should take warning against dishonest and fake, moneygetting radium-cure establishments conducted by individuals who possess little or no radium, and have no knowledge of its use. These people promise cures, but are, in reality, unable to obtain even those palliative effects which are possible from radium.

The best results of radium therapy can be secured only when comparatively large amounts are available for use and the present limited world's supply of this metal places it out of reach of the great majority of patients.

THE PREVALENCE OF CANCER.

A Menace to the Individual: Cancer is of greater frequency at ages over forty than tuberculosis, pneumonia, typhoid fever, or digestive diseases.

At ages over forty one person in eleven dies of cancer.

One woman in eight and one man in fourteen over forty years of age is attacked by the disease with fatal results.

Largely because of public ignorance and neglect cancer now proves fatal in over 90 per cent. of the attacks.

A Menace to the Nation: Of the 75,000 deaths from this disease in the United States in 1913, about 30,000 were deaths from cancer of the stomach and liver, 12,000 from cancer of the uterus and other organs of generation, 7,500 from cancer of the breast, and about 25,500 from cancer of other organs and parts.

A Menace to Society: Cancer respects neither race, creed, nor social position.

It is the common enemy of all mankind, attacking rich and poor alike.

Its insidious onset occurs at the most useful period of life; and death is most common at the age when the care and guidance of children and the continuance of business responsibilities make the mother and father the most useful members of society.

THE CONTROL OF CANCER.

A Message of Hope: The only cure for cancer is to remove every vestige of the disease.

The only sure way to do this is by a surgical operation.

If taken at the beginning, the majority of cases of cancer are curable.

All cases will end in death if let alone. Records of our best hospitals prove that the chances of cure are very high with early operation, and that these chances decrease with every day of delay.

Early diagnosis is therefore all-important.

A National Campaign: The American Society for the Control of Cancer is studying these hospital records and will spread nation-wide the message of courage and hope in early recognition and prompt operation.

By publishing circulars and articles in newspapers and magazines, and by organizing lectures and public meetings, this society is conducting a general campaign of education based on the latest knowledge of the disease.

Thoughtful and influential people can help this work by joining The American Society for the Control of Cancer. Write to the office, 289 Fourth Avenue, New York City, for further information.

RURAL SANITATION.

CHICK GERM CARRIERS.

It is charming to observe how everybody keeps on helping everybody else. of the discoveries in medical science, by which grievous diseases have been prevented or cured, have been suggested by the work of people who were and are not doctors, especially in the sciences underlying agriculture. In fact the whole of modern preventive medicine is founded on Pasteur's investigation of a silk worm disease and the initial discovery of a disease germ, that of anthrax, which is essentially an animal dis-On the other hand agriculture has been helped by the medical discovery that there are human germ carriers and that such diseases as typhoid fever and cholera are distributed not only by those who have suffered those diseases, but also by some that have never experienced the symptoms of them-have just harbored the germs in their systems and have distributed them wherever they have gone; like the cook who, though she never had typhoid herself, in those migrations from family to family the comic papers tell us about, left a long series of typhoid cases in their wake. Indeed it has been figured out that one in every thousand of us is a typhoid carrier.

The medical methods by which such things have been proved have been applied by L. F. Rettger and his associates in the Storrs Agricultural Experiment Station in the study of Bacillary (that is, germ) White Diarrhœa of Young Chicks. And these investigators have proved that the germs responsible for this fowl disease is the Bacillus pullorum, by which ovaries are infected; this germ is thus retained in the egg and is transmitted to the developing chick.

Chicks that recover from white diarrhœa may continue to harbor the Bacillus pullorum for a long time, perhaps while they live, without revealing any evidence of the disease; and it is considered that when such chicks reach maturity the hitherto latent infection becomes actively centered in the ovaries by reason of the intense physiological activity of those organs during egg production. Or there may be infection of the ovaries after the chick's maturity through the droppings of diseased chicks or by louse and mite transmission. Infected female chicks may develop into permanent Bacillus pullorum carriers and be a constant source of danger to young and old stock. rier condition may be demonstrated in fully one-fourth of an infected flock. investigations losses of many thousands of dollars in the animal industry should be averted.

THOSE CHESTNUT POISONING CASES.

OCTOBER last, when headline stuff was scarce, a lot of newspapers told how chestnuts collected from trees affected with blight were poisonous and were producing disease and death; mostly around Hartford, Conn., variously in Massachusetts; one case up New Hampshire way; and another down in Jersey—above twenty cases in all. Besides, in Western Massachusetts gray squirrels were dying, presumably from eating chestnuts off those blighted trees.

Well, Dr. Dwight Marsh and his associates of the Office of Drug and Poisonous

Plant Investigations, of the United States Department of Agriculture, got busy. And they found that all the reported cases in Western Massachusetts came down to two: in one of these the illness had nothing to do with chestnuts; and although the other patient had been eating chestnuts that came from an area in which some of the trees were affected with blight, his family doctor could not find that chestnuts had anything to do with the trouble. In Eastern Massachusetts not one case was found that chestnuts, good or bad, had anything to do with

In the New Hampshire case the boy had been eating a considerable number of chestnuts; which had been gathered, however, from perfectly healthy trees—just a case of plain, old-fashioned mulligrubs, calling only for castor oil and the usual caution against superalimentation in the future.

Fact is—and most people will agree—raw chestnuts are not very digestible anyway. Here even the adamantine digestive apparatus of the small boy is not absolute proof. The result: sore mouths and the boy "all broke out in a rash," as with so many other indigestions. Also there are those having an idiosyncrasy, like that toward hives or hay fever, which asserts itself when many chestnuts are eaten.

And about those gray squirrels. A game warden found two such dead that he assumed had perished from disease, since he could find no shot marks on them. Dr. Marsh had chestnuts collected from trees which were said to have been associated

with cases of illness, and fed them to rats, rabbits and a monkey. All these creatures (the monkeys especially) ate these chestnuts with avidity; and developed no disease. Then, to make absolutely sure, extract of chestnuts collected over a "blight" area were injected into mice; no disease resulted. And a chemical examination of the nuts for the detection of any toxic principle gave "negative" results.

There is thus no ground for imagining nuts from trees affected with chestnut blight to be any more injurious than those from healthy trees. This ought to be known generally, because last year this occasionless chestnut blight scare resulted in dealers having to throw away their stock of nuts; a most unjustifiable loss both to them and to the venders, oftentimes very poor men, who depended on this traffic for a living. Such losses should be made up by generous purchases, in so far, at any as would not be conducive to rash indigestions

THE CAT AS A RATTER.

No globe trotter has ever come anywhere near the rat in the multiplicity of its voyages and the latitudes and longitudes it has visited. The gray (Norway) rat and its black kinsman have colonized in all parts of the world, distributing the flea, which is the common carrier of the germ of bubonic plague.

Wherefore our national and local health officers are constantly anxious about rats. Many shipmasters take along cats on their voyages under the optimistic delusion that thus are the rats aboard killed off. Well, when the British steamship Ethelhilda, arriving at the New Orleans Quarantine Station, its Captain assured Surgeon G. M. Corput, of the United States Public Health Service that rats could not live in his ves-

sel, certainly not in his cabin, because his cat was a particularly prime ratter. But our surgeon just thought he'd make sure. So the cabin was fumigated. During which proceeding an inadvertent and deplorable cat-astrophe occurred. For by the irony of fate the poor feline was forgotten. The result? One defunct cat and twenty-four equally dead rats in the cabin alone—with many other dead rodents in every other part of the ship.

Apart from ship rats and their disease-possibilities rodents everywhere occasion a stupendous economic loss (or rather waste, since it is preventable) by devouring crops and household provender. You can absolutely rat-proof your house. How? That's another story, which was told in the June, 1914, issue of The GAZETTE.

It is a truism that the efficiency of the social unit is conditioned more by his physical status than by any other one factor. That the inefficiency due to ill health, however, constitutes a burden to be borne by the whole of society rather than the individual is a concept which has been fully recognized only of recent years.—J. W. Schereschewsky, Public Health Rep.

We should all remember that to be like other people is to be unlike ourselves, and that nothing can be more detestable in character than servile imitation. The great trouble with imitation is that we are apt to ape those who are in reality far below us. After all, the poorest bargain that a human being can make is to give his individuality for what is called respectability.—Ingersoll.

PNEUMOCOCCUS BACTERIEMIA.

ALL physicians now agree that lobar pneumonia is an acute general infection having, in most sufferers from this disease, its principal lesion in one or both lungs. As in tuberculosis the question is important, as to the extent to which the infection is hematogenous. Thus far a tubercle bacillus bacteriemia has not been demonstrated to the satisfaction of bacteriologists; but this would not necessarily argue their absence from the circulation, because any technique adequate for the detection of tubercle bacilli in the blood may not yet have been elaborated. At any rate, no one doubts the presence of the tubercle bacillus in the blood of patients having acute general miliary tuberculosis; nor that in this very malignant and rapidly fatal type of the disease, the bacilli have burst through the body's lymphatic barriers.

In lobar pneumonia it seems unquestionable that, early in the disease at any rate, the pneumococci are taken up by the lymphatics and are passed through them to the lymph glands in their course; as the inflammatory process develops the lymph glands swell and their sinuses become packed with pneumococci. Whilst most of the latter are destroyed and never develop sufficiently to be demonstrated in the blood, it would seem that, especially in grave cases of pneumonia, pneumococci do get through the lymphatic bacterial filter and reach the blood stream. and this (observed Dr. Meltzer, in discussing his colleague, Dr. Cole's work on Pneumococcus Infection) occurs at a period when the blood has lost a great deal of its defensive ammunition; there is thus often a fatal issue "which explains why Dr. Cole and others could easily find bacteria in the blood only in fatal cases of pneumonia." In Meltzer's and Lemar's animal experimentation with cultures of a very virulent pneumococcus, bacteriemia resulted only in the In other experiments by fatal cases. Meltzer and Wollstein, with a non-virulent pneumococcus, typical pulmonary consolidations were obtained, with no mortality and no bacteriemia.

Is the pulmonary lesion but a sign of the disease, or is it a consequence? Apparently the anatomic changes in pneumonia are not the cause of death, nor do they present the essential features of the disease; on the contrary they are but manifestations of the body's fight against the infection (Meltzer).

Dr. A. R. Dochez has reported that in thirty-seven cases of pneumonia treated in the Rockefeller Institute the pneumococcus was not constantly found in the blood; this bacterium was isolated from the blood in one-half the cases studied. The course of infection in sufferers having pneumococci in the blood was more severe than when no pneumococci could be cultivated from the blood. Seventy-seven per cent. of patients with positive cultures died; seventy-nine per cent. with negative cultures recovered. In fatal cases of pneumococcus bacteriemia the number of organisms per c.c. of blood was very high in the last stages of the disease. In cases dying of pneumonia without discoverable bacteriemia, the disease was characterized by a rapid spread of the local pulmonary process. It is not unlikely that the symptoms of collapse, developed in the fifth or sixth day of lobar pneumonia, are oftentimes the expression of serious invasion of the blood by pneumococcus. Strains of pneumococci isolated from the blood of lobar pneumonia patients were usually of high virulence for animals; in a few instances where the pneumococcus isolated from human blood was of low virulence for animals, the patients recovered.

In certain cases of lobar pneumonia it seems that the pneumococci either invade the blood in great numbers; or having reached that fluid, grow so actively that death ensues from septicaemia—and this before any considerable area of lung has become involved.

Sleeping outdoors is beneficent not only for the healthy; but thus is also assured the cold air treatment now found essential for the cure of tuberculosis, pneumonia and many other diseases. The disadvantages of

the tent, the porch, various window appliances and other contrivances for sleeping outdoors need not here be dwelt on; they seem to be obviated in the plan described by Dr. E. P. Hershey in *The Denver Medical Times* of May, 1914.



TWENTY-ONE CASES OF TYPHOID FROM ONE TYPHOID CARRIER.

A FARMER in Wisconsin, about six months after his supposed recovery from typhoid fever, infected three sons and his wife with the disease. From this time on, those who visited and ate at his house showed a marked tendency to typhoid until the actual number of victims reached twenty-one. At this point an investigation was instituted by Professor Ravenel, bacteriologist of the University of Wisconsin,

and the farmer's urine was found to be inhabited by typhoid bacilli. The investigation showed that each of the twenty-one cases could be traced with reasonable certainty to this one carrier as no other carriers were found in the family, although all members of the family had suffered and recovered from typhoid. The report is published in the Journal of the American Medical Association.

THE SANITARY CONSCIENCE.

ONE of the most remarkable developments of this age in which we live is the awakening of a sanitary conscience. It is a new thought in the minds of many men that the care of the body and cleanliness of surroundings are a very considerable factor in the comfort, safety, and even the life and health of their fellow-men. The sense of moral goodness which comes from a clean and hygienic life is part of the doctrine of sanitary righteousness. Preventive medicine teaches that we must not only

safeguard our own bodies against infection and keep our own surroundings clean for our own sakes, but quite as much for our neighbor's sake. It teaches the lesson of the unselfishness of community interest and has been a potent biological factor which underlies the present trend toward socialism. One man alone cannot fight the fight against the common foe—infection; it takes the combined and intelligent cooperation of the community.—Professor Rosenau.

THE HEALTH OFFICER.

THE State, in the interest of its own preservation, and progress, has assumed control of certain activities closely affecting the life of every citizen. Among these are the care of the public roads, the distribution of the mails, and the education of the youth. Still other activities now in private control should be supported by the State for the benefit of the whole people. One of the most important of these and the one perhaps receiving most public attention at the present time is the care of the health of the people, a function now delegated largely to physicians, men who receive their reward for community service in the form of fees from private individuals. Under the present system the physician is prosperous in inverse ratio to the health of the community.

"The doctor is busiest during those seasons when illness prevails most. Were there

no disease there would be no need of physicians. This would be an ideal condition for which the people would be glad, not because of hatred of physicians, but because of love for their own welfare. Since the physician to-day receives his reward from the curative side of medical practice he is not professionally interested in the prevention of disease. The public need is for a medical fraternity paid by the public whose interests will be as much in the prevention of disease as in the cure of it. Were physicians paid by the State, they would not fear the loss of income through working for the interests of the well while at the same time attending to the ill, because the lessening of illness would not necessarily interfere with their incomes. Further, the greater their success in the prevention of disease the less the labor that would be required in the cure of it.—Professor Vogt.

CORRESPONDENCE

AN EDITOR'S WOES.

To paraphrase the good old song. Taking one consideration with another, an editor's lot is not a happy one. Here is a part of a letter which has found its way into the GAZETTE sanctum: "It appears to a constant reader as though the moral tone of The GAZETTE is not quite what is used to be. Most assuredly no one can do more to cleanse, purify and uplift, mentally, morally and spiritually as well as physically, than the physician, the trained nurse and the Medical Magazine."

These observations certainly startled us, as though we had received a blow. Faults we have, both as Physician and as Editor. Our faults as physician are not always discoverable; old Diogenes realized that much about doctors many centuries ago when he declared that practitioners of medicine are fortunate men-in that their successes (their cures) are obvious, whilst their failures are hid beneath the ground. But our editorial faults are uncoverable, for they are patent on the printed page. And yet among our editorial faults we never realized our lack of moral tone. That shows how even editors do not live up to the Socratic dictum: Know thyself. In fact we had considered ourselves rather strong in the moral and even in the spiritual way-to the extent indeed that friends have feared we were suffering from a conscience working overtime. as from a fever and have advised us to take something for it-something by way of a counter-irritant: To take dinner in a cabaret; or dance the tango; or do like the man who most recklessly drank two bottles of ginger ale and got "real devilish" in consequence.

Naturally, then, the accusation gave us a sleepless night. And next morning we sent post haste to our most well-intentioned correspondent, asking for specifications. In what particular or particulars had we been lacking in moral tone? And when had the lack of moral tone in The GAZETTE been observed—was this during our incumbency, since August of 1913, or was it possibly previous to our incumbency?

But we have received no answer to our anxious inquiries, although we were very careful to give the assurance that the information would be held confidential.

Seriously, however, we thank our correspondent for the criticism. And we beg to assure all our readers that we would be grateful for all such interest in THE GA-ZETTE. We are anxious to make this a perfect Journal of Personal and Public Health. That end we, being but human, shall probably not achieve; for 'tis not in mortals to attain perfection. But all the same this consideration is not going to prevent our constant striving. If, by chance, bouquets are handed us in these columns, we shall be grateful for them; but much more grateful shall we be for any adverse criticism that is offered us with helpful and chastening intent.

The Editor of THE GAZETTE: Please give me plainer directions for making cold water coffee as described in your September issue. We have no Austrian coffee biggin nor percolator.

[The department stores in all the great cities have for sale porcelain percolators which will answer admirably the purposes set forth in the article on Cold Water Coffee Infusion, to which our subscriber refers. If such percolators are not to be

found in all American communities, one's dealer can procure them or they can be got by mail order.]

The Editor of The Gazette: Publication in the September Gazette of my article on Homograde Thermometer greatly pleases me. I know of no other periodical in which I would prefer to have it appear—F. E. ASPINWALL, M.D.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

Leisure Hour was founded in the belief that the physician is but human; that he lowes the beautiful in thought and sentiment as expressed in literature, and that he is at times surprited with technical matter. Short, crisp contributions on any of the subjects named in the sub-heading are invited to this department.

THE PRACTICAL OPTIMIST.

There are all sorts of definitions, there's every kind of definition of the optimist—the man who sees an orange in a lemon, and so on. And there is not a little cant in some of these definitions. Most human progress has been made through the efforts of men in whose temperaments there has been a judicious blend of the optimist and the kicker. And if it comes to that a frank, out and out, pessimist, who works and hopes for better things to come, is a nobler specimen than your blind and supine optimist.

Optimism is the ideal state so long as you retain a reasonable and wholesome amount of dissatisfaction, so long as you do not neglect the eternal duty to fight, and fight hard and ever, against the wrongs which still hurt mankind and civilization. The right kind of man, in short, is your practical optimist; and when such an optimist is, all the time he is maintaining such a temperament, grievously suffering physical ills, it appears to us high Olympus has been scaled. It is to that kind of an optimist we here introduce the reader.

Mr. Charles Cristadoro is indeed already well known to the readers of The Gazette, by reason of the superb articles by him which have, from time to time, appeared in our columns. One of these articles appears in this issue. And between the lines one easily can get the spirit and, if need be, the lesson, of practical optimism. Mr. Cristadoro has stated the fundamental principles of this club to be as follows:

"There is a rational optimism which even the most inveterate pessimists—'knockers,' colloquially speaking—should be glad to encourage, based on the belief that the world is growing better and that evil is retreating before the progress of science, intelligence and justice. An optimism which works and corrects, which studies history and human nature and which is prepared to demonstrate to any doubters that life is and always has been worth living and seeks to inspire men with enthusiasm and courage. Progress is not a delusion, but a fact. The world is growing better every day."

When he set down these principles, now more than a year ago, Mr. Cristadoro wrote that his club was in good working order, although, so far, with but a single individual member, who is the president, vice-president, treasurer, secretary and board of directors. The club lives in hopes that the membership may be increased. No initiation fees or physical gymnastics and annual dues are required and no hold-up quets are given.

Mr. Cristadoro at that time urged every citizen of San Diego to join, even the school children to become active members, to be optimistic, day by day. "The motto of the Point Loma Optimist Club is, What can you do? We don't care much to hear what you have done or may do in the future for San Diego, some day, but what can you do for San Diego now, to-day, and what can you do and keep on doing for the good of San Diego on each and every one of its 365 sunshiny, balmy days in the year.

The point here is, wouldn't it be a good idea for every reader of Mr. Cristadoro's superb philosophy to substitute for San Diego, the name of his own home hamlet, or town, or burg?

In exemplification of practical optimism we make here some excerpts from Mr. Cristadoro's writings—real literature:—

"Do you remember seeing a reprint of a painting by Kraus, I think, of an old and kindly village cobbler carefully studying a pair of 'worn to a frazzle' shoes, the owner looking on with equal concern? To apply the simile: The only thing I can honestly plead guilty of is schooling myself into a constant condition of occupation when conditions improved to permit of it. And that the cause was a sensible one and that because of the consequent extrospection I mended to a certain extent, and was able to remain on this earth and keep going. In other words I lived along from day to day because I managed to live out of myself. Injecting a little good humor and optimism into the situation I made matters just a little more pleasant for those around me and incidentally, for myself. So that, really, is all there is to it. Beyond that I cannot see anything worthy of notice, either along the lines of 'pointing a moral or adorning a tale.' There isn't an appreciative soul who enters my sun and wind-modified lath-house but who, as it were, envies me despite all my trials and tribulations. I wish every man who wielded a pen could have such a retreat. The breathing, exhalation of the blooms and the surrounding bird chorus are the only 'distractions,' if they can be so called instead of inspirations. So, could you jump into your (prospective) 500 miles-per-hour aeroplane and point it towards the Mexican border and stop just short of it at Pt. Loma, this would be the spot. Could I do so, I would like to share it with all. As it is I am inclined to think that it must be enlarged, for, when a dozen people crowd in at a time it looks like a case of standing room next year, if all the friends who promise to come do come. More and more come as it is. the case of a 'trail in the wilderness.' 99 44/100 per cent. strangers.

"Last Saturday we had the usual anniversary of June 6, 1910 when they rolled me off alive and not dead from the operating table.

"My life is a peculiar one. I spend the day in an invalid's chair, in a lath-house in the garden. At 6 p. m. I go to my bed more or less exhausted, and am asleep at 7 p. m. My 'sleep is out' at 1 a. m. when I sit up in bed and write until 7 a. m. Then nursing, and again in the lath-house at 8 a. m. and breakfast, mail at 8:30 and busy for the rest of the day. Rather long hours, but keeping busy every moment prevents, an invalid's worst enemy, introspection.

"The Doctor says I am able to stand a boat trip to San Francisco, and that it will do me good! Think of what that means to me after nearly ten years in an invalid's chair! To see a 'movie picture show' and a score of other won-der-ful sights! Like a child going to the circus!!

"I would like to recite many most interesting experiences, e.g.: Little Mexican school children singing, and 'saluting the flag.' And the papers full of war talk against Mexico. Their fathers are across into our line, industriously at work under our flag. Straight haired, dusky faced, *luminous*-eyed children and very intelligent looking. No peonage for these boys when they grow up. They may go back to Mexico and lead along bettering ways. Curious how intently they watched me and listened to me talk. And quick to respond to any amusing sallies I might make.

"High school at National City (5 miles from San Diego), built in mission style, cloisters, tiles, etc., etc., but inside modern in every way, an up-to-the-minute school. The studied attention given my talk pleases me very much indeed—and they insist on 'more' when I show an inclination to quit.

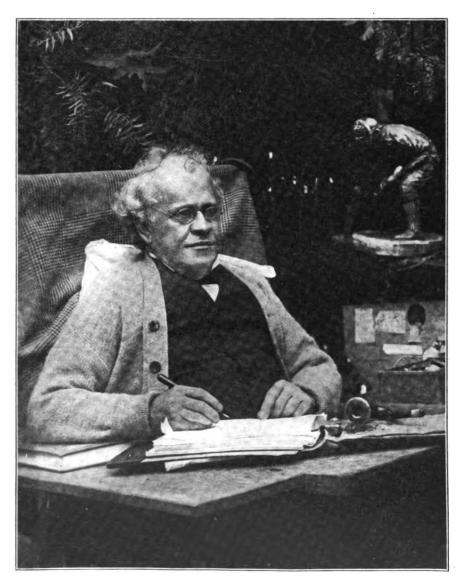
"The superintendent has 450 schools in the county and he has asked me for a few little essays or stories, 200 words each, to pass through the schools. I lightly treat commonplace things, natural history, hygiene, food, etc., on an understandable, yet interesting plane, my object being to excite interest and make the children hunt up for more information in the encyclopedia—and write compositions on my essays.

"I get much pleasure writing these little screeds, they fill gaps in my work, have already sent in 50 and presume I may send them 100 or 200 if opportunities present.

"I know my writings are, at best, crude and unpolished, (sic) spontaneous, and I cannot and do not keep them for days to mall over and shift and change and, like rice, polish them up—and, to my way of thinking, harm them, as is done when, to

polish rice, they rub off the valuable protein that adheres to the exterior and gives the cereal a brown appearance and which 'to please the eye' is wastefully abraded.

"However, the sentiment is here and that really is what counts. A good thought expressed, even in misspelled words, is better than a worthless sentiment beautifully expressed. No ripple of permanence is left to the reader."



CHARLES CRISTADORO

A MODERN LULLABY.

(New York Evening Sun)

ROCK-A-BYE, baby, upon the bough, You get your milk from a certified cow!

Before your eugenic young parents were wed

They had decided how you should be fed.

Hush-a-bye, baby, on the tree-top,
If grandmother trots you, you tell her to
stop.

Shun the trot-horse that your grandmother rides—

It will work harm to your little insides.

Mamma's scientific—she knows all the laws—

She kisses her darling through carbolized gauze.

Rock-a-bye baby; don't wriggle and squirm;

Nothing is near you that looks like a germ

"LINES UPON READING A GARDEN ANNUAL"

by Mildred Howells, in Scribner's:
What do I care if snows drift deep
And chill the north wind blows,
When, in the sheltered room I keep,
A glorious garden grows?

Free-flowering Ramblers climb and cling Immune from Bug and Blight, While from the floor Show Pansies spring, As big as saucers, quite.

Larkspurs and Phlox their standards rear So thick with flowers no room Is left for leaves, and through the year Display Continuous Bloom.

Exotic Ferns and Orchids Rare Grow rankly all about, Thriving the Better without Care, Indifferent to the drought.

So why revile grim winter's rage
When summer fails to show
Such flowers as those the Seedman's page
And boundless fancy know?

HINTS FOR BOYS.

(To do what they want to when they want to do it)

TACT.

When your father has a headache you should always bang the door;

If your mother's feeling giddy you should stamp upon the floor;

Yell and whistle as you run—it is really ripping fun,

And discourages your elders when they tend to be a bore.

ON GETTING UP.

When the matutinal knock
Comes to rouse you from repose,
Quite regardless of the clock
Turn and take another doze.
Should your relatives complain
Do not let it give you pain;
Never mind if breakfast's late,
It will do them good to wait.

DEPORTMENT.

How provoking is the mat
Lying by the entrance door!

Mud abounds, but what of that?
Carpets cover every floor.

Walk exactly where you please
(Manners should have perfect ease),
Asking, when your parents tease,
"What are rags and carpets for?"

—ROSAMUND MARRIOTT WATSON, in Harper's Monthly.

"THE EVENING COOL"

By the Bentztown Bard in the Baltimore Sun:
O tired day, the evening cool
Lies round you like a limpid pool.
And over it the fresh winds bring
The breath of wind refreshening;
The nesting birds one last chirp sound,
The little insects beat the ground
With footsteps like the tap of rain—
Miss Night is at the window-pane!

Dear earth, how deep must be thy joys In evening cool, when on thy ears The laughter of the little noise Of night comes down the grove of years. Of little fledglings going to rest, The chatter over every nest As there by Nature's cradle stands Miss Night, with poppies in her hands!

BOOKS

CIVILIZATION HAS IMPROVED SOME.

Most men vaguely remember Prince Henry the Navigator in connection with the burst of exploratory zeal which led to the discovery of America, and as the man mainly responsible for the enormous ebullition of colonizing energy which raised Portugal, for the time being, to the foremost position in Europe. The detailed outlines of his life were some time ago recorded by I. P. Oliviera Martins, an historian of Lisbon, whose book is now translated by J. J. Abraham and W. E. Reynolds, under the title of "The Golden Age of Prince Henry the Navigator" (Dutton). Martins's work is rightly described as giving a glimpse "of the color and movement of the fifteenth century, when Moslem and Christian fought fiercely for dominance in Europe, when grim mediæval barbarism mixed and mingled with the pomp and circumstance of knightly chivalry, with childlike Christian piety and budding transcendentalism, which makes it read more like a cunningly devised historical romance than history." The picture it renders of the Prince is, as compared with the works of Major and Beazley, distinctly favorable. But the author does not forget that his ambitions to make North Africa a new Portugal were preposterously mistaken, and led to the ultimate undoing of his country. "It was one thing to subject the ocean and establish fortifications along the shores of countries inhabited by more or less divided and ineffective populations—this was what a mere handful of Portuguese tried to accomplish in the East. It was quite another thing to establish a stable empire in these regions. to populate them with vigorous, thrifty people, and to bless them with a living proselytizing faith. To suppress the Arab or Moor, to usurp their dominions, the Portuguese required a large, better-populated fatherland." Of the character of the Prince it can only be said that it was consonant with the age.

It was he who, hoping to stimulate conquest by desire for gain, inspired the first slave-raid by a Christian nation in history,

and set up the first slave market on the beach at Lagos, Portugal. The captives. about 1,444, had been rounded up from the African coast south of Cape Blanco; not without cruelty. They numbered about 250, one-fifth of whom belonged to the Prince. They were, as a chronicler of the time puts it, regarded as a gift from "Our Lord God, who always rewards the upright, and wished duly to recompense the Portuguese for all the labor they had given in his serv-On horseback Prince Henry rode along the beach, superintending the landing and division of his plunder; while the fields about were crowded with Portuguese spectators. The slaves huddled together in dazed attitudes of apprehension. "Among them," to quote the mediæval chronicler again, "were some more white than others, handsome and of promising aspect. Others were almost brown. Others again were as black as ebony, and as hideous as Ethiopians both in face and body. Some were overburdened with grief, and their faces were wet with tears; others cried loudly in their affliction, gazing toward the skies, shouting as if imploring Nature to come to their aid; others covered their faces with their hands, and threw themselves prostrate on the ground; while others again voiced their tribulation in weird chants." Prince Henry was totally unmoved. To him their souls were as black as their skins. "He began to portion them with the idea of equalizing the commercial value of each lot; and when he thought it expedient to separate fathers and sons, wives and husbands, he respected no family ties; they were grouped merely according to the laws of his discretion." He even exchanged captives from one lot for those of another, so as not to discontent the owners of the lots, doing it with a callous cruelty. Thus it would often happen that subdued grief would suddenly assume the proportions of an explosive chorus of despair, when they saw that "the father was taken to Lagos, the mother was dragged to Lisbon, and the sons to other parts."

NUGGETS.

From Primitive Psycho-Therapy and Quackery by Robert M. Lawrence, M.D. (Houghton Mifflin Co., Boston).

A written medical prescription of to-day, after having been filled and copied by a druggist, is usually considered to have fulfilled its mission, but the annals of popular medicine afford ample evidence of the narrowness of such a view. The practice of swallowing the paper whereon a recipe is written, as a veritable charm-formula, is of great antiquity, and is still in vogue in many lands. The idea involved in this singular custom is of course a superstitious regard for writing as a magical curative.

Among various African tribes written spells, called saphies, are commonly used as medicines by the native wizards, who write a prayer on a piece of wood, wash it off with water, and cause the patient to drink the solution. Mungo Park, while in West Africa was once asked by his landlord, a Bambarra native, to prepare such a charm; the latter proffering his writing-board for the purpose. The traveler complied, and the negro, whilst repeating a prayer, washed the writing off with water, drank the mixture, and then licked the board dry, in his anxiety to derive the greatest possible benefit from the writing.

Lucan, the Roman poet, declared that even the world might be made to stand still by means of a suitable incantation, thus voicing the popular belief of his time in the miraculous power of words.

So great was the interest aroused by Mesmer's methods and the many seemingly marvelous cures resulting therefrom, that the Royal Society of Paris appointed a commission, which included Benjamin Franklin, to investigate the subject. This commission reported that those patients who were not aware of the fact that they were being magnetized experienced no effects from the treatment. Those who were told that they were being magnetized experienced symptoms, although the magnetizer was not near them. Imagination, apart from magnetism, produced marked effects, whilst magnetism, without imagination, produced nothing. The benefits resulting produced nothing. The benefits resulting

from Mesmer's treatment were due, according to the commission's report, to three factors, namely: (1) actual contact; (2) the excitement of the imagination; (3) the mechanical imitation which impels us to repeat that which strikes our senses.

The ability to cure disease without the use of medicines or surgical appliances has been claimed by alleged healers in all ages. When such cures were effected, they were attributed to a special gift with which the healer was divinely endowed, and this gift was bestowed, in tare instances, upon individuals distinguished by especial sanctity.

Mummy dust was prescribed by English physicians as late as during the reign of Charles II., to promote longevity; they reasoned that inasmuch as pulverized mummy had lasted a long time, it might, when assimilated by their patients, assist the latter to do likewise.

The wicked may enter on the practice of psychotherapy; but the subconscious mind will reject their evil suggestion. In the hypnotic state the real bent of the normal mind and personality is more ready to follow the good and reject the bad suggestion than in the normal, conscious state. Instinctive morality comes to the aid of the genuine psycho-therapist, and refuses its co-operation to the counterfeit.

From Manalive by Gilbert K. Chesterion.

A WIND sprang high in the west like a wave of unreasonable happiness, and tore eastward across England, trailing with it the frosty scent of forests and the cold intoxication of the sea. In a million holes and corners it refreshed a man like a flagon, and astonished him like a blow. In the inmost chambers of intricate and embowered houses it woke like a domestic explosion, littering a floor with rare professor's papers, till they seemed as precious as a fugitive; or blowing out the candle by which a boy read "Treasure Island" and wrapping him in roaring dark. But everywhere it brought drama into undramatic lives, and carried the trump of crisis across

the world. Many a harassed mother in a mean backyard had looked at five dwarfish shirts on a clothes line as at some small, sick tragedy; it was as if she had hanged her five children. The wind came and they were full and kicking, as if five fat imps had sprung into them; and far down in her oppressed subconsciousness she half remembered those coarse comedies of her father's when the elves still dwelt in the bones of men. Many an unnoticed girl in a dark, walled garden had tossed herself into the hammock with the same intolerant gesture with which she might have tossed herself into the Thames; and that wind rent the wavering wall of woods and lifted the hammock like a balloon and showed her shapes of faint clouds far beyond, and pictures of bright villages far below, as if she rode heaven in a fairy boat. Many a dusty clerk or curate plodding a telescopic road of poplars thought for the hundredth time that they were like the plumes of a hearse, when this invisible energy caught and swung and clashed them round his head, like a wreath or salutation of seraphic wings. There was in it something more inspired or authoritative even than the old wind of the proverb; for this was the good wind that blows nobody harm.

FROM THE LIFE OF THE FLY, BY J. H. FA BRE (DODD, MEAD & Co.).

LABORATORIES are being founded, at great expense, on our Atlantic and Mediterranean Coasts, where people cut up small sea-animals, of but meagre interest to us; they spend a fortune on powerful microscopes, delicate dissecting instruments, engines of capture, boats, fishing crews, aquariums, to find out how the yolk of an Anneldi's egg is constructed, a question whereof I have never been able to grasp the full importance, and they scorn a little land animal, which lies in constant touch with us, which provides universal psychology with documents of inestimable value, which too often threatens the public wealth by threatening our crops. When shall we have an entomological laboratory for the study, not of the dead insect, steeped in alcohol, but of the living insect; a laboratory having for its object the instinct, the habits, the manner of living, the work, the struggles, the propagation of that little world, with which agriculture and philosophy have most seriously to reckon?

To know thoroughly the history of the destroyer of our vines might perhaps be more important than to know how this or that nerve-fibre of a barnacle ends; to establish by experiment the line of demarcation between intellect and instinct; to prove, by comparing facts in the zoological progression, whether human reason be an irreducible faculty or not; all this ought surely to take precedence of the number of joints in a Crustacean's antenna. These enormous questions would need an army of workers; and we have not one. The fashion is all for the Malluse and the Zoophytes. depths of the sea are explored with many drag-nets; the soil which we tread is consistently disregarded. Whilst waiting for the fashion to change I open my harmas laboratory of living entomology; and this laboratory shall not cost the ratepayers one farthing.

DIETETICS, or Food in Health and Disease, by Wm. Tibbles, Medical Officer of Health, Fellow of the Royal Institute of Health, etc., etc. Published by Lea and Febiger, Philadelphia and New York. \$4.00.

In this volume Mr. Tibbles (who, being an Englishman of note, has a whole alphabet of titles, all of them assuredly well earned, after his name), deals with food in health and disease and applies well the theory and principles of dietetics to the many conditions and circumstances of life. And this book, together with the author's previous work on Foods; Their Origin, Composition and Manufacture, forms a complete system of dietetics.

Mr. Tibbles is pre-eminently fitted for the task he has here well performed, having for many years made dietetics his special And the practical application of the matter in this book should benefit vastly the physician's patients when they are sick, and should indeed prevent a great deal of The work is certainly most exhaustive and after principles are stated, their application is shown in diseases of the lungs, nervous system, stomach, intestines, skin, heart, liver, kidneys, and of the various glandular organs; in gout and rheumatism, obesity, diabetes, fevers and tuberculosis. The chapter on intamines and the deficiency diseases is especially important.

THE MENTAL HEALTH OF THE SCHOOL CHILD, THE PSYCHO.—Educational Clinic in Relation to Child Welfare; Contributions to a New Science of Orthophrenics and Orthosomatics. By J. E. Wallace Wallin, Ph.D., Professor of Clinical Psychology and Director of Psycho—Educational Clinic, School of Education, University of Pittsburgh, etc. \$2.00. Yale University Press, New Haven, Humphrey Mulford, London, Oxford University Press, 1914.

Dr. Wallin has most fittingly dedicated his fine book to Professor S. Stanley Hall, the Founder of the Modern Child Study Movement. It has long been held that many of the most vexatious problems in our social economy are somewhat bound up with the mental and educational abnormalities of childhood. Wherefore many will welcome a volume, such as Dr. Wallin offers us, which demonstrates a deep appreciation into the nature, extent and causes of the mental, moral and educational arrest, deviation or deficiency of children, and in which will be found the aid which practical psychology can give in the diagnosis, identification, study and training of feebleminded, backward and mentally abnormal school children. In Wallin's valuable book will be found discussions of Medical and Psychological Inspection of School Children; The new Clinical Psychology and the Psychoclinist; Human Efficiency; Binet-Simon graded tests of intelligence; Psychoclinical norms and scales of development; The euthenical and eugenical aspects of infant and child orthogenesis; Experimental oral orthogenics; The effects of Dental Treatment on Mental Efficiency; the relation of oral hygiene to efficient mentation in backward children; Measurement of the orthophrenic effects of the removal of physical handicaps; Efficiency in school organization; The conservation of the mental health of children; A scheme for the clinical study of mentally and educationally unusual children. The book is admirably indexed.

A MANUAL OF PRACTICAL HYGIENE for students, physicians and health officers, by Charles Harrington, M.D., late Professor of Hygiene in the Medical School of Harvard University; fifth edition, Revised and Enlarged, by Mark Wyman Richardson, M.D., Secretary to the State Board of Health of Massachusetts. Illustrated with 24 plates in colors and monochrome and 121 engravings. Lea and Febiger, Philadelphia and New York, 1914. \$5.00.

The late Dr. Harrington was one of the very ablest among the workers in the comparatively new science which has, since its beginning in the modern sense, about a generation ago, been so pregnant with benefi-cence for humankind. And his book demonstrated his great abilities and influence. Of recent years it has been evident to many that the science to which he devoted the best years of his life has grown beyond individual scope. Wherefore, Dr. Richardson, in preparing this fifth edition of Dr. Harrington's work, has associated with him in his revision the experts associated with him in the Massachusetts State Board of Health, the first such board to be established in America and a board unexcelled to-day for the high character of its laboratory investigations and of its public health administra-Thus revised line by line, this fifth edition reveals the subjects of personal and public hygiene in their latest developments. It will certainly answer the requirements of all those interested in the most vital of human considerations—the individual and the communal health.

COLLECTED PAPERS FROM THE RESEARCH
LABORATORY OF PARKE, DAVIS & Co.,
Detroit, Mich. Reprints—Vol. 2, 1914.
Physicians will find in this book technical and scientific papers on Hog
Cholera. The Treponema Pallidum,
The Bacillus Bronchisepticus, The
Drug Influence on Extrasystoles, Protective Enzymes of the Blood as a
Means of Extracorporeal Diagnosis,
Adrenalin in the Treatment of Asthma,
The Treatment of Tetanus, etc.

THE REPORT FROM THE PHYSIOLOGICAL DEPARTMENT AND THE DEPARTMENT OF CLINICAL PSYCHIATRY, Central Indiana Hospital for Insane, Indianapolis, Ind. Vol. V. Physicians will certainly be interested in these most scientific reports. Especially worthy of note is the programme of lectures to be delivered by able physicians on Mental Pathology and on Mental and Nervous Diseases.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M.D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS 1HAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

THE SHORTAGE OF PUPIL NURSES.

EVERY discussion of the shortage of nurses and the remedy for the same is well worth our consideration, because, if reports are reliable, the condition appears to be growing more acute. We do not intend to enter into a full discussion of the situation, but we wish to review a very suggestive article in the American Journal of Nursing, by Miss Mary M. Riddle, R.N., whose high rank in the nursing world entitles her to speak with authority.

Concerning the various causes of this "alleged shortage," Miss Riddle believes that it is hardly right to ascribe too large a share of the responsibility to the raising of educational standards for entrance to the nursing schools. She affirms that there is no particular evidence of a shortage "in those schools which give value received to the pupil nurses for the services rendered the hospital." Pupils are likely to go where they can "get the most for their time and money." Naturally, a wholesome competition among schools, on this basis, ought to attract more pupils. These arguments are perfectly sound and should be taken by many of our hospitals as a rebuke for their policy of overworking and undertraining their pupils.

In defending the long course, which is evidently synonymous in her mind with the "best" course she makes this assertion:

Everybody agrees that we need the best nurses that can be trained; the public and the physicians demand the best, notwithstanding the fact that they sometimes reason to the contrary. It has for a long time been noticeable that the advocates of the untrained nurse, or the one less trained, have usually urged her services upon others, she has not been considered suitable for them, their patients, their families, or their friends.

And in another place she says:

If the medical profession and the sick public want Sairy Gamps and Betsey Prigs, perhaps they ought to be allowed to have them. Also if it can be proved that nurses qualifying through the much-advocated shorter course can better meet the demands, why, surely, let us adopt it.

It is unfortunate that Miss Riddle should mar an otherwise excellent presentation of

the matter by taking a fling at the "medical profession and the sick public," as if neither the doctor nor his patient cared anything for good nursing. The author certainly must know that this is an economic question, and not a question whether or no the "sick public" and the medical profession shall stand for the long course of nurse Whatever may be the idea of the sick man with reference to the nursing curriculum, he hires the nurse that he can afford to pay. Does Miss Riddle presume to ridicule him for his desire to live within his means, whether well or ill? She might as well say that if the "sick public" want cottages instead of mansions, lamb chops instead of squab, or water instead of champagne, "perhaps they ought to be allowed to have them." Certainly the well-to-do have usually been quite generous in conceding to the poor their time-honored privilege of living in poverty. Before a representative trained and registered nurse presumes to taunt the "sick public" or their physicians with employing second-rate nurses, she should show the people where they can employ trained nurses for \$8.00 or \$10.00, or even \$15.00 per week. Probably Miss Riddle would not advise graduate nurses to do private nursing at these low rates. Neither do we.

Whom, then, is the "sick public" likely to get in the capacity of nurse? Naturally, some one "qualifying through the much-advocated shorter course," or some one worse. Would it not be a neighborly service for the nursing profession to encourage the short course and try to help their humbler sisters in preparation for their work, in order that the poor man may get his money's worth when he pays his precious \$10.00 for a nurse?

It is perfectly plain to everybody, except the worshipful "leaders," that the "sick public" must have two, or more, grades of nurses from whom to select those who are economically possible in his emergency. If it is advisable to train the graduate nurse three or four years, it is equally advisable to train the helpers, the non-graduate nurses, for as long a time as possible; and those who know how to do it ought to begin doing it now. For several years the correspondence schools have done quite a business in this line—and what honest person can blame them for it? The trained nurses have always met the correspondence schools with plenty of opposition, but never with competition. These schools must give good courses, for they do not complain of a "shortage of pupils!

Two very good arguments are presented in favor of high educational standards:

The superintendent and teacher of nurses is rare who has not sometime been almost overcome by the wave of discouragement sweeping over her at the knowledge that some pupil (graduated from her school), has failed of the greatest measure of success, perchance in the care of a patient in private duty. She knows she did her best with the material in hand and resolves to be more careful in her selection of future pupils. She knows the failure to be due to lack of understanding of the amenities of life or possibly to an ignorance that could not have existed if her nurse had been better educated to start with.

Again, barring an occasional exception and all other things being equal, she knows that when the stress comes and there must be an unusual exertion made to meet a crisis, whether in public or private work she can best depend upon the woman of broad and liberal education for it. This may be owing to the fact that the broad education has enabled the nurse to get the different points of view and harmonize her course to meet the situa-Moreover, experience has taught us that it is the nurse of broad education who has the least to say about the menial duties of her profession. She is above it because she knows there can be nothing menial in rendering professional service to the sick who are in her care, while the untrained nurse, unless she be actuated by the highest religious motives, is unable to grasp the full significance of the value of her work, or its possibilities. These are two pleas for maintaining the educational standards and they are vital ones, even though they should cause a shortage of nurses.

This is all very true, but let the educated nurse remember, again, that it is the size of her fee and not the length of her schooling that will determine her availability to the great mass of our people. Many a welleducated nurse is sitting idle in her room at this minute, while the work that she would be delighted to do is being performed very imperfectly by women unworthy to be called nurses. It is an economic question, and some people are experiencing hard times.

There is, however, one phase of the shortage in the nursing situation that somewhat alarms the people who are ever thoughtful for the welfare of the sick, viz., the very evident falling off in the number of the best qualified nurses who are willing to do private duty. A glance at the great new body of public health nurses would do something toward convincing one of this fact. Consider its size, its enthusiasm, its enterprise and its personnel and conclude that a great draft has been made upon the private nursing body to form it.

Why is it that many trained nurses are taking public health positions at \$60.00 per month and paying for their living, when they would refuse to do private nursing at \$15.00 per week, with board and room thrown in? Probably the regularity of the monthly salary, with no uncertain periods of idleness, and the freedom from responsibility during the evenings and Sundays, make public health work attractive to the nurse who has been a slave several years to the exacting demands of private nursing. Whatever the motive, it is true, as the author observes, that many of the most capable nurses are going into these salaried positions; and for every nurse so employed there are, perhaps, five others on the waiting list and ready to accept appointments.

If any nurses have need of education and intelligence, surely those in the public health services will find these needs imperative. They need the best of training in order to fill acceptably some of the responsible stations offered them in the health departments of our states and cities. At the other end of the list is the nurse who must be willing to undertake the care of her patient and attend to the wants of the family at the same time—combining domestic services with the simplest forms of service in the sick room. While her position in the world is humbler than that of her trained colleague, she is none the less essential to the community, and she should have all the training that our wiser sisters can devise means of giving her. We have always said this, and we repeat it again. Sometime the trained nurse will accept as her appropriate function the instruction and guidance of her untrained but not unworthy—sister.

The trained nurse is too apt to show her petulance toward the medical profession and the "sick public" when they allow the non-graduate to minister to their needs. Such an attitude is childish, and does not advance the cause of the educated lady who maintains it. If there were to-day no nurses who would work for half the fees received by the graduate nurse, the public would demand such nurses and would get them in some way, in spite of all laws. This is an economic question. Where a demand exists there must be a corresponding supply-unless the demand can be

killed.

A TRAINED NURSE DOES GOOD MEDICAL WORK.

Mission fields offer the nurse opportunities and responsibilities that would be quite impossible in a land where medical practice and nursing laws cover every nook and corner of the field. The Missionary Herald gives this appreciative notice of the work of a missionary nurse at Davao, Philippine Islands:

"The medical work, despite the absence of Dr. Sibley on furlough, has been carried forward under the direction of Miss Mary R. Mathewson, the trained nurse. There were 13,000 treatments during the last year. Sixty leper suspects were gathered at Davao, but it was found they were

really suffering from malignant tropical ulcers and in most wretched condition. They were nearly all from wild tribes. Miss Mathewson and her assistants took over their care in a separate location. Six were in such frightful condition as to be beyond help, and these six died; but the others were all sent home cured.

others were all sent home cured.

"A splendid new mission site has been secured on high ground outside Davao City. One residence has been completed, a second is soon to be begun, as also the mission hospital, which will thus be moved to a beautiful and healthful location. The new site will also provide room for a school later on for the wild tribes. The present hospital building may be used as a town dispensary."

NEEDLE TRANSFIXING THE STOMACH WALL.

ONLY two cases are to be found on record where a needle has protruded through the wall of the stomach; one was reported about six years ago in England, and the case referred to below was reported in the *Medical Record*, by Dr. Oliver C. Smith, of Hartford, Conn.

The patient was a married woman, 37 years old, somewhat neurasthenic, who had recently recovered from a serious abdominal operation

A bismuth skiagram taken by Dr. Arthur C. Heublein revealed a normal stomach in size and contour, but showed clearly a foreign body, pin or needle, protruding 1½ cm. through the anterior stomach wall at a point 3½ cm. proximal to the pylorus on the lesser curvature. A second skiagram was taken two days later just prior to operation confirming the findings of the first.

Operation at the Hartford Hospital, October 2d, under gas-oxygen-ether anesthesia. The

stomach was exposed and the pointed end of the needle, dark but not corroded, was found protruding through the wall of the stomach in the peritoneal cavity at a point corresponding to the appearance in the skiagram. The needle was drawn out of the wall of the stomach by forceps, breaking immediately after its removal, the portion of the needle lying within the cavity of the stomach being extensively corroded. The small opening in the stomach wall was closed with two pursestring sutures and the wall of the abdomen was closed without drainage. The stomach regained its normal function within a few days, and the patient rapidly regained her lost weight.

The patient had probably carried the needle in her stomach for over two months. The case illustrates nicely the wonderful value of the X-rays in revealing conditions that would otherwise be hidden. Occasionally we find a "sure thing" in modern medical practice.

DISTINCTION BETWEEN "TUBERCULOUS" AND "TUBERCULAR."

THERE is a great deal of confusion among medical men as well as laymen in the use of these two words. A correspondent of the Journal of the American Medical Association asks for the proper distinction between the terms, and we are glad to give the reply in the words of the Journal:

Careful writers apply the term "tubercular" to lesions characterized by the presence of nodes or tubercles, whether caused by the tubercle bacillus or by any other agent; and "tuberculous" to lesions produced by the Bacillus tuberculosis or to conditions associated in one degree or another with tuberculosis. That is to say, the word "tubercular" applies

to the external form of a lesion; the word "tuberculous," to the cause, actual or possible, of a lesion or a condition. Thus, tubercular leprosy, caused by the Bacillus leprae, is so called because of the nodular character of the lesions, while tuberculous pleurisy is so called because produced by the tubercle bacillus. A "tuberculous diathesis" is a predisposition toward tuberculosis; the tubercle bacillus, whether capable of being demonstrated or not, is regarded as a factor, potential or operative, in the condition.

As most of us have occasion to use these words only in reference to tuberculosis, we can afford to discard the word "tubercular" and stick to the other word all the time.

DOGGING THE HEALTH COMMISSIONER.

NEW YORK CITY has a muzzling law which became effective in September. We append a brief statement from the Weekly Bulletin, with a few of the letters received by the Commissioner of Health, Dr. S. S. Goldwater:

Since the adoption of the muzzling ordinance, the Department has been flooded with letters from interested citizens, an overwhelming majority of whom have commended the action of the Department, while a few, holding contrary views, have expressed themselves in opposition. Extracts from the letters received are here presented, showing the divergent views of citizens. It will be noticed that the antediluvian Ostrich Party, whose platform declares that there is no such thing as rabies, still has a few scattering supporters.

"Your recent order that all dogs, whether in leash or not, in the public streets, public buildings, apartment houses, etc., must be muzzled, is certainly a step in the right direction and worthy of the highest commendation by all fair-minded citizens of this great City.

S. D. H."

"At last we have some one in power with courage enough and common sense backed by intelligence to try to remove dogs from New York. Why should we stand all this barking, smell, howling, etc., besides danger to health and morals is more than I could ever comprehend. Please continue on those lines.

E. C. P."

"I agree with you that all homeless dogs in the streets should be destroyed, but when you say that dogs are filthy, you do not know what you are talking about. Don't forget that a dog is a man's best friend, and ever faithful and a protection. How long would you last in the late Mayor Gaynor's cabinet? We all worked for you to be made Commissioner and did not expect to see you act so inhuman.

C. H."

"Apparently a number of our city folks have become indignant over the plan of not permitting unmuzzled dogs upon the streets. I cannot see that the muzzling of these animals will in any way torture or injure them, but it will on the other hand serve as a precaution against possible injury to little children. I have no dislike for dogs or any other animal, but my love for little children and my consideration of human beings is greater than for dogs. H. S."

"What is this country coming to in the twentieth century? There is no such thing

as mad dogs or people being bitten, and even now it is the half starved mongrels who do the damage. No dog that is leashed goes mad.

"A Friend to Dumb Animals."

"God watches over all, and notes the fall of even a sparrow, and people who think they can treat animals in this life with impunity will be rather surprised at the accounting they will have to render to the Creator of all.

E. C."

"Why maintain the Pasteur Institute? Why pay vast sums to specialists to study the germ of rabies? Put the dog like any other dangerous animal in the Zoological Garden and thus save the lives and health of our people, and stamp out forever the horror of hydrophobia. I have lavished love upon dogs, like many others, but am not blinded to the danger of the stray dog who lives upon decayed and germ covered garbage. Some of us will live to look back with horror upon the barbaric time when so many lives were sacrificed by the useless keepings of dogs.

Mrs. E."

"Nearly three years ago my little son, five years old, was coasting on a hill in our neighborhood, Morris Heights, 177th street and Cedar avenue, when, entirely without provocation, a little fox terrier sprang at him and threw him in the snow, and, at each attempt he made to rise, biting him viciously about the face, hands, ears and arm. It was with great difficulty that the animal was at last driven off by a man with a shovel. It was the well cared for pet of one of our neighbors—not a stray dog. It was one year before the little fellow recovered his nerve.

Mrs. A. C."

"Of what use are dogs in the city? Perhaps of no more good than to be at least one true friend to mankind, and that is more than one can say of the majority of the human animal, male or female. There is more harm than good done by muzzling a dog, and the only animal which should be muzzled or put on a leash is the animal called Man.

A Citizen of the Free Country."

"Surely an occasional rabid dog will not lead you to condemn the whole race any more than an occasional insane human leads us to ask what is the use of any of us.

M. F."

"I am very much surprised to read that you approved of banishing dogs from cities. You may as well banish children. Dogs have been great companions and a lot of comfort to many people in the world, and the bark of a dog has often warned the owner of danger. We have given you credit for many good things you have done, don't spoil it. R. H. L."

"Let me suggest what I think is the only solution to this matter. Have the Board of Aldermen pass an ordinance making it illegal to keep a dog in any house occupied by three or more families, with a penalty for violation of same, and give the Health Department power to enforce this ordinance. You would thus rid the city of 90 per cent. of its dogs.

P. E."

"I entirely agree with you. If the superintendent of the A. S. P. C. A. had one death in his immediate family by hydrophobia he would feel differently about dogs. All the dogs in the world are not worth one human life. H. G."

"I want to thank you for the stand you have taken against the greatest nuisance in the city (dogs in apartments), and I hope you may enlist all the papers in the crusade. Aside from danger to health by contact, the microbes more numerous than from any other carrier, the nuisance on sidewalk, street cars and parks makes it a most timely crusade. I hope all doctors will aid you.

Dr. T. J. W."

HOW THE NURSE HELPS THE MILITARY CAMPAIGN.

THREE years ago, while addressing a body of Territorial Nurses, Lord Haldane, the British Secretary of State for War, made this prophecy which the nurses little thought would be so amply fulfilled in the year 1914:

Should the country ever be invaded, and the general hospitals mobilized, they will be the back-

bone of the Service, and we shall depend upon the nurses, with others, to keep up the strength of the force by sending back the fighting men to the front. In the old days, if a man were wounded he was out of that campaign. Now a very large percentage of men come back to the front, and that is due to the skill and science which nurses bring to bear upon the work of restoring them to health and strength.

DEATHS FROM MEASLES.

EVERY few months it is well to repeat the warnings of our health authorities against those contagious diseases that the public is prone to call "harmless". Measles is one of the diseases that is fearfully underrated in the popular mind, and the school nurse who keeps a suspicious eye on all cases of "colds" is too often considered fussy and Yet the child who is even meddlesome. snuffing and sneezing to-day may be infecting his mates with measles and may come out with a pronounced rash before the week is over. He ought to be sent home before he has a chance to infect others, even though it is impossible to prove that he has measles to-day.

Measles, far from being harmless, sometimes leaves the child with sequelae that disable him for life. As to the fatal cases, the Buffalo Sanitary Bulletin wisely observes that "a child dead from measles is just as dead as he would be from any other cause."

This warning from American Medicine is timely at any time:

The mortality from measles is so great that the medical profession should take immediate steps to disabuse the minds of mothers that the disease is so trivial that no pains need be taken to prevent their own children contracting it or giving it to others. The last census report shows that in the registration area it caused 7/10 of 1 per cent. of all deaths, or about ten per 100,000 of popula-tion. More recent estimates place the deaths at 1 per cent. of the total mortality from all causes, but if we include the cases reported as bronchitis, pneumonia or tuberculosis, it is safe to say that it causes much more than 1 per cent. and that the total yearly deaths in the country are 12,000 or more, mostly young children. The census report says: "Undoubtedly sufficient attention is not given by the health authorities and by the public to the restriction of this disease." We heartily concur in this opinion. Experience shows that the public needs instruction and that it complies with reasonable restrictions as soon as it learns the necessity. Laymen are not fools and will not intentionally kill their own offspring, nor will they deliberately murder other children. The deaths are more numerous in cities. The disease is now quarantinable in New York State and the restrictions. tions upon school attendance should be much more rigid than the law requires. People must also be told that it is infectious even before the stage of eruption and perhaps as long as there are nasal discharges.

This item from the Buffalo Sanitary Bulletin may give some of our readers more patience with the exactions of our quarantine laws:

From several parts of the country reports indicate severe outbreaks of measles. To show how easily this disease spreads it is stated that a man who visited Kansas City caught the measles, went home telling his friends what a bad cold he had. In two weeks twenty-eight cases occurred where there had been contact with him. One of these

twenty-eight went to another town. A child attending school caught the disease from him, forty-three families were infected, over ninety case occurring. A visitor to the first village came home, attended the city school and over 100 case occurred there. County examination of school teachers was held in the latter place and thirty more cases developed. There were over 300 case directly traceable to this one man, with all the attendant doctor bills and other expenses.

Measles spread with the same ease and rapidity

as a spark on a dry prairie.

GERMS.

By Ella Kaiser Carruth, Clinton, N. Y.

In this age of civilization
We have learned with consternation
That each human ill is due to some small
"bug."

We are told our one salvation
Is hygienic sanitation
Which is better than the best-known bottled drug.

So we take to sterilization
Of the play-things of the nation
And no baby has a dirty doll to hug.

We don't trust to mere filtration Of our daily liquid ration, But we put it, boiled and harmless, in a jug. When we go on our vacation
We refuse to leave the station
Without our private paper drinking-mug.

And the strictest regulation
In a home of education
Is that every one must help to fight the
"bug."

But in HIGHER education
There is no such regulation
As is seen in every hard-fought football tug.

If the player's respiration Seems beyond all reparation When they've been the luckless victims of a "slug"—

Then there seems no hesitation Without any reservation To apply the same old sponge to EVERY "mug".

HIGHER EDUCATION FOR NURSES.

By Mary E. Pennington, Niagara Falls, N. Y.

As a class nurse of only one year's standing, my ideas are of small value, I know. Nevertheless I should like to lay before you my opinion and what I believe to be the opinion of other girls with college educations who have taken up nursing, in regard to the question of a higher educational standard for nurses.

It seems to me that girls graduating from the different colleges could do no better, if they have the additional three years for scholastic work, than to take up nursing, not so much from a mercenary view, although that is a factor, but because it is a big field with a bigger future before it, has a wide scope of endeavor, and is a calling second to none.

Broadminded, conscientious, thinking nurses do not belittle those who have gone before them, nor those who are working in the same field to-day whose mental attainments do not reach their own, because they realize that these women have borne the brunt of nursing and have raised its stand-

ards from ignominy, induced by ignorance, to its present-day position. They can see that it remains for those of increased abilities to polish this diamond in the rough.

I have observed in the short time I have been in the nursing field, that the pupil nurse with a better education gets more from her training; she is able to see the smaller and finer points that are being taught, while her sister nurse is grasping essentials.

Not long ago it was my privilege to observe the treatment and care of a patient operated on for cancer. As the result of a consultation of three of the prominent surgeons of the state, an order was given to which the nurse protested. She stood in a most unprofessional attitude, spoke in a most unprofessional manner, saying: "Doctor, the patient can not take care of so much drug; her vitality is too low; she'll go out." The doctor speaking didn't seem much surprised, so, of course, I was forced to the conclusion that it was a common thing for him to be addressed in that manner by nurses. Now, that nurse was a graduate of one of our foremost hospitals, but her education was away below par. I like to think that if she were educated she would have been lady-like, at least.

To my mind, not until the hospitals establish a true standard of admittance and adhere to it, or take the other solution of admitting non-qualifying applicants as attendants, will the problem even approach a solving.

The present agitation and unrest in the profession has some portent. Usually agitation in other fields means progress. Let us hope it is so in our own.

NURSE TRAINING FOR COLORED YOUNG WOMEN.

THOSE who have become trained nurses in our schools prove that they are capable of mastering the profession to the extent at least of serving their own race with great devotion and efficiency. So that in the work of saving life their scientific training is a great boon to the Negro people. All of our higher institutions now make provision for this training as a great service to the race.

Founded twenty years ago for the purpose of affording colored women the nurse's training, the Provident Hospital of Chicago was then the only institution of its kind in the country, except the Government Hospital at Washington. Its endowment started from the pathetic bequest of an old colored woman who, dying, had just \$50 to leave. Her direction was "Give it to two charities established for my people, one-half going to Provident Hospital."

The hospital has graduated more than 118 nurses and has now in training twentyfive colored women. It has cared for a total of more than 14,000 patients in the wards and 88,000 in the dispensary. Among these poor have been numbered people of all races. Asked if these colored women made efficient nurses, a competent critic replied:

'From the standpoints of order, dignity, and technical skill, the nursing force of this hospital seems to compare more than favorably with hospitals of the same size and class in other cities where the nursing serv-

ice is composed of white women."

The Provident Hospital is distinctively a Negro enterprise.—The American Missionary.

OPEN-AIR HOSPITALS IN WAR-TIME.

By ROBERT SAUNDBY, M.D., F.R.C.P., Pro fessor of Medicine, Birmingham University.

Building committees have been in the past anxious to erect a structure which as they say should give those who subscribe to its cost something to look at and be proud of. Such sentiments have to my knowledge greatly influenced the builders of hospitals,

and have been put forward as the justification for a good deal of not strictly necessary ornament. During the last twenty years we have been learning the lesson slowly, but it is sinking in deeply, that the usefulness of hospitals is almost in inverse proportion to their architectural merits, and that our exaggerated notion of "comfort" is inconsistent with healthy surroundings. Draughts of air, low atmospheric temperature, dampness are not the disease-bearing agencies they were once supposed to be, while bad ventilation and equable, warm temperatures are depressing, debilitating, and retard recovery. Even dampness does no harm where there is a good current of air.

THE DANGERS OF ARTIFICIAL VENTILATION.

With the elaborate artificial system of ventilation introduced into the Birmingham General Hospital it was possible to maintain the wards and corridors at practically the same temperature day and night, and this was fixed at 60° F. as the recognized sickroom figure. But it was soon found that its very equability was a disadvantage, that those who had to work in these temperatures felt weakened, and within a few months after the building was opened for use the temperature of the corridors and that of wards at night was reduced to 55° F., the former figure of 60 degrees being retained for the wards by day. By degrees complaints were heard, not from those who had to work in these temperatures or on their own account, but by and on behalf of the patients, especially the surgical patients, and above all the children, complaints of delayed convalescence, of debility, and of retarded healing of wounds, results which would have been more seriously felt and less easily borne if it were not the case that the hospital has in the Jaffray branch a suburban dependency to which stationary cases can be transferred, thus relieving the beds of the parent institution. In spite of these advantages the complaints did not diminish and the need for fresh air was urgently felt. By many members of the staff the elaborate system of ventilation was regarded as worse than a failure, but as it provided the only means of heating the building it was endured, and other means of remedying the evils were sought.

THE BETTER WAY.

Fortunately the architects had provided balconies, more for ornament than utility, at the free ends of the wards, and to these balconies, enlarged in some cases by structural alterations, the patients are removed, being accommodated in long wicker chairs; but even so only a proportion of the patients can benefit by this treatment. A proposal to build large verandahs to each of the wards of the Jaffray Branch, to which access should be given by windows opening

down to the ground, was, although supported by the medical staff, rejected by the committee on the grounds of structural difficulties and expense, and this highly desirable alteration still remains to be made.

AN OPEN-AIR WARD.

first attempt was made, although only on a small scale, to treat ordinary hospital patients in an open-air ward. The ward is on the roof of the hospital and is about half

It was at the Queen's Hospital that the covered in, but quite open to the south. It certainly did not look "comfortable," and seemed open to the objection of getting all the smoke as well as the rain and snow. After it had been in use for some time I visited it with the late Professor Foxwell, who had suggested its creation, and what surprised me most was that patients and nurses seemed to like it, and my fears that it would be regarded as "uncomfortable" received no kind of encouragement from those to whom I spoke. Moreover, I found that they were not surgical cases only, but in fact were chiefly medical, and in particular I was shown a case of pneumonia which was doing very well. I climbed down from that visit to the roof converted, not to the advantages of open-air treatment only, for of that I had been long convinced, but of the practicability of carrying it out even in the middle of a smoky city like Birming-

EXPOSED TO SUN, WIND AND WEATHER.

During the meeting of the British Medical Association in Liverpool in 1911, I had the pleasure of visiting the Country Hospital for Children, where, in a large ward quite open to the estuary of the Dee, I found something like 150 children of ages from two to ten or thereabouts. Their cots were placed close together and in three rows parallel with the long axis of the ward and to the open side. Here there was no question of floor space or cubic feet of They were in the fresh exposed to all the sun that shone on that shore, and to all the wind and weather that might befall. These children from the slums of Liverpool were suffering from all sorts of diseases, medical and surgical, and were under the care of Dr. Macalister and Mr. Robert Jones. were presumably ill, but they did not look They had rosy cheeks for the most part, and their appearance testified most strikingly to the vivifying effect of open air. They were as unlike the ordinary inmates

of a children's hospital ward as it is possible to imagine. Why have we been slow to recognize that fresh air is the best tonic, the best antiseptic? It is cheaper, pleasanter, and undoubtedly more efficient than drugs. The successful treatment of tuberculosis in the open air led the way to the wider adoption of this method for other diseases. It was his observation of the results achieved by Dr. Huggard at Davos, whose advocacy of fresh air and courage and success in inducing his patients to discard their prejudices in favor of "warmth and comfort" were so remarkable, that inspired Dr. Foxwell with the wish to give the same plan a trial in the treatment of ordinary diseases at the Queen's Hospital. Yet the open-air treatment of consumption has been carried out for only some twenty-'ve years, although its value has been demonstrated by Mr. George Bodington, of Sutton Coldfield, and explained by him in his little book on "The Treatment of Pul-monary Consumption," published in 1840. Half a century had to pass away before the plan was revived, and this was not the direct result of Bodington's teaching; nor, we must regret to feel, was it due to the efforts or clear-sightedness of his own The Warwickshire surgeon countrymen. might know the truth, but his little lamp soon flickered out, and his contribution to the knowledge of his profession was forgotten, although when its value was proved by the work of Walther of Nordrach and others it received the belated honor of being included in the 173rd volume of the New Sydenham Society's reprinted monographs (1901).

THE AMERICAN CIVIL WAR RESULTS.

The experience of the American Civil War was all in favor of improvised hospitals or tents, but it preceded the enormous advance in surgical treatment due to Listerism, so that surgeons look back on those days with a shudder at results which were so poor, even where there was abundance of fresh air and sunlight, owing to the existing ignorance of the causes of wound in-Yet those who took part in the medical and surgical work of the war had no doubts, and in the report of Surgeon-General Billings, in Circular 4 of the "Medical and Surgical History of the War," he says, speaking of hospital construction, "The object to be kept in view is to furnish shelter without diminishing that supply of pure air and light which is necessary to health." Other points, such as locality, exposure, plan of construction, modes of heating and ventilation—are only of importance in so far as they secure that object. Wiser words were never written, but it is doubtful whether their meaning and importance have been fully appreciated or allowed due weight when the question of hospital construction has arisen. We have learnt that life in the open air is not only possible but pleasant—that cold air is a tonic, as George Bodington maintained—that warm rooms are debilitating, and that a free supply of external air is not disagreeable, while a current of air that enters from ventilators or partly opened windows and other narrow openings causes draughts which, when they impinge upon the inmates, give rise to discomfort and complaint too often resulting in their being stopped up.

WHAT OPEN-AIR DOES IN WAR-TIME.

It is to be hoped that these principles may be borne in mind in the course of the arrangements that are being made and will have to be made in the provision for the sick and wounded during the present war. It is quite probable that the accommodation already made will prove insufficient. In the American Civil War and in the Franco-Prussian War the suitability of wooden buildings was abundantly proved, and with our increased knowledge and confidence in the advantages of simple structures it is to be hoped that no more money will be wasted upon structural alterations for hospital use, but that simple erections will be made, for which there are many good designs to be seen in the more recently erected sanatoria for the treatment of consumption, none being better than that recently opened at Little Bromwich, outside Birmingham. these in many respects may be simplified in accordance with the temporary use to which they will be put. Open wards dispense with all need for considering methods of heating and ventilation; windows and doors are not required, but it may be desirable in some places to have sliding wooden screens to afford a certain amount of protection in stormy weather. Flooring may be made of asphalt or simply beaten earth covered with a thick layer of pine sawdust, which can be renewed easily with a shovel and which absorbs all damp to an extraordinary extent. The late Professor George Vivian Poore demonstrated the great value of pine sawdust as an antiseptic absorbent and its special value for taking up and deodorising such liquids as urine. He was asked by the South-Western Railway to suggest a simple form of urinal for the use of the men engaged in their works at Basingstoke, and he proposed the provision of a simple trough made by two planks put at an angle, filled with pine sawdust; when he was asked how often the sawdust would have to be renewed he said "Practically never." He was in the habit of showing his friends a flannel jelly-bag half full of sawdust which he and his assistant had used in his room at University College for six months as a urinal, the effluent from which in the whole of that time amounted to something less than a pint of a pale fluid which smelt only of turpentine.

THE PROPOSED TEMPORARY HOSPITALS.

If these hospitals are put up as is proposed in the grounds attached to buildings, or in unoccupied land in their neighborhood, there ought to be no difficulty about the disposal of fæces, which should be superficially

buried in shallow trenches. Soiled dressings should be burnt, and a proper furnace connected with the sterilizing apparatus would be a necessary adjunct to the hospi-The University buildings at Bournebrook, Birmingham, have been transformed at very considerable expense into a hospital of 600 beds, but it is likely that many more will be needed. There is plenty of room for the erection of such an annex as I have in mind, and there would be no difficulty in Birmingham in forming a committee to provide the money and equipment and to superintend the provision of all that is needed for such an extension. The campaign in favor of fresh air and sunlight is also that of efficiency and economy, and where money may be the decisive factor in this great struggle, there can be no justification for wasting it, especially when better results may be obtained by cheaper methods.—The Hospital.

SURGEONS AND NURSES.

By a Fellow of the Royal College of Surgeons.

THE adoption of antisepsis, and subsequently of asepsis, necessitated a very great advance in the training and education of nurses, and was simultaneous with the adoption of the nursing profession by educated ladies in the place of the Sairey Gamps and Betsy Prigs of the pre-Listerian era. Many of these women were as shrewd, as gentle, as conscientious, and in their way as skilled, as the best nurses of the present day; but they were of a very inferior social class, and though many of them performed admirably the duties that were expected of them, these duties were of a simple character, such as could be picked up by an intelligent woman by mere practice in the wards without special teaching or training; and few of the nurses of those days would have been capable of acquiring the high technical skill of the present-day nurse if it had been required of them. Nursing is now advanced to the dignity of a profession. It is true that we have heard a parvenue hostess apologise to her guests for asking them to sit down to table with a nurse, but this was an exposure, not of the inferior status of the nurse, but of the vulgarity and ignorance of the hostess. Educated and cultured ladies of gentle and of aristocratic birth, even princesses of royal

houses, now see no degradation in learning the duties of a sick nurse, and in adopting nursing as a calling.

It is the more remarkable, therefore, that the treatment of nurses by some surgeons has undergone at the same time a change in the direction the very reverse of what might have been anticipated. Now that surgeons and nurses belong to the same social class, and that a surgeon may at any time meet in society, and at the table of common friends, the nurses who have had care of his patients and may have care of them again; now that marriages between surgeons and nurses take place every month, and are taken as a matter of course, there are some surgeons who treat nurses in much the same way as a ship's captain treated his crew a hundred years ago, a way in which no ship's captain would venture to treat his crew in these days. The pre-Listerian surgeons-men like Paget, Ferguson, Savory, Hutchinson, Timothy Holmes, Henry Smith, and their colleagues -had to deal with nurses who were scarcely, if at all, above the servant class; and these surgeons treated their nurses with the courtesy with which well-bred gentlemen treat their servants. The present writer, who has witnessed innumerable

operations by these great surgeons, never heard so much as an expression of impatience from any one of them towards any of their assistants—anæsthetist, dresser, or nurse. They were gentlemen, and they did not assume that the performance of an operation entitled them to cease to be gentlemen.

There are now surgeons, some of them leading men in large practice and in the highest rank of their profession, who do assume this license. They are either so agitated by the performance of an operation that they lose all self-control; or their gentlemanly feeling is so skin-deep that the slightest breeze of emotion sweeps it all away, and leaves the native boor unconcealed; or they become so inflated with self-importance that they consider the ordinary obligations of courtesy no longer apply to them.

Whatever the explanation, it is notorious that there are surgeons who never address their nurses during an operation without an oath, and rarely address a nurse at any time without a profusion of expletives. Nor is it only in their language that they treat their nurses with contumely and insolence. The following instance appears incredible, and we should not believe it were it not

that we have it on the independent words of different nurses, in different employment, entirely unconnected with one another and unknown to each other. A well-known surgeon after an operation was approached by a nurse with a basin of water to wash his hands. The water was not, it appears, of exactly the correct temperature to satisfy the surgeon. It was a trifle too hot or too cool, and therefore he expressed his disapprobation by tilting up the basin towards the nurse, and emptying the whole of its contents over her person. She was drenched to the skin, and had to change her clothing, and, what was of importance to her slender purse, to pay for the washing and ironing of her dress and apron. In our opinion, she would have been justified in breaking the basin on his head, but the poor girl had her living to get, and could not afford to show her resentment. We do not know whether this is a regular or habitual practice on the part of the surgeon in question, but it has been related to us as having occurred more than once, and to different nurses; and the curious part of it is that the surgeon by whom this was done is said to be opposed to the forcible feeding of suffragettes.—The Hos-

Questions and Answers.

THE following answers are not "official." They are prepared for the Editor.

VERMONT BOARD OF REGISTRATION OF NURSES ANATOMY AND PHYSIOLOGY.

Examination at Montpelier, Vt., November 13, 1913.

Number each answer and letter each subdivision. Do not write the questions.— Dr. Gale.

1. Describe the vascular system of the human body, naming principal organs and tissues.

Ans. The vessels, called arteries, capillaries and veins, are tubes containing the blood; they consist of a thin lining of endothelium, and walls made up of white fibrous connective tissue, yellow elastic connective tissue, and unstriated muscle. The heart is a hollow organ of four cavities; it propels the blood through the vessels; it

is made up principally of cardiac muscle tissue, with some connective tissue, and covered inside and outside with endothelium.

2. Describe the mechanism of Respiration, naming organs and tissues involved.

Ans. The nose, pharynx, larynx, trachea, bronchi and lungs make up their respiratory tract. The diaphragm and muscles of the thorax are the muscles of respiration. The tissues involved are epithelium—columnar, flat and ciliated; muscle—striated and unstriated; connective tissue—fibrous, areolar and elastic; cartilage; bone; blood;

lymph. Inspiration is the reception of air into the lungs and is accomplished by increasing the size of the thoracic cavity in every direction by the simultaneous lowering, or flattening of the diaphragm and the raising of the ribs by the action of the thoracic muscles of inspiration. Expiration is the opposite process and follows the relaxation of the inspiratory muscles, which leads to the falling of the ribs, while the relaxed diaphragm is pushed upward by the elastic pressure of the abdominal walls Internal respiration is the and viscera. name applied to the distribution, through blood and lymph, of oxygen taken from the alveoli of the lungs, and the bringing of carbonic acid gas from the internal tissues to the lungs in the same way.

3. What and where is the pleura? Its function?

Ans. The serous membrane covering the surface of the lungs, and lining the cavity of the thorax. It prevents friction between the lungs and the thorax during respiration, by a serous secretion which lubricates its surface.

4. What is the difference in structure and function of arteries and veins? (a) Name largest artery.

Ans. Arteries carry blood away from the heart, and have usually thicker walls than veins, with predominance of elastic tissue, and muscle. Veins carry blood toward the heart, have thinner walls which are inelastic from the presence of white fibrous connective tissue; they are provided with valves to prevent backing up of the blood. (a) Aorta.

5. Describe the digestive apparatus and name accessory digestive organs.

Ans. It is a tube, called the alimentary canal, consisting mainly of involuntary muscle and a lining of mucous membrane, extending from the lips to the anus—about thirty feet—and receiving the ducts from certain glands; its divisions are, mouth, pharynx, œsophagus, stomach, duodenum, jejunum, ilium, cecum, colon and rectum. The accessory organs are: teeth, salivary

glands (parotid, submaxillary, sublingual), liver, pancreas and spleen.

6. How does pleura differ from other tissues in the body?

Ans. It contains somewhat more elastic tissue than the pericardium or peritoneum.

7. What and where is the oesophagus?
(a) How long is it?

Ans. A muscular tube, lined with mucous membrane 'and joining the pharynx and stomach; it lies between the trachea and spinal column. (a) About nine inches.

8. How long is the alimentary canal of the human body? (a) Give subdivisions of the large intestine. (b) Small intestine.

Ans. About thirty feet. (a) Cecum, colon (ascending, transverse and descending), sigmoid flexure and rectum. (b) Duodenum, jejunum, ilium.

9. What is the process of mastication and what is effect of same?

Ans. Biting, crushing and grinding between the surfaces of the teeth, and mixing with saliva. Effect is to comminute the food and soften it, preparatory to the action of the digestive juices of the stomach and intestines.

10. By what avenues are the waste products eliminated from the body?

Ans. Kidneys, lungs, skin, and, to some extent, the intestinal tract.

11. Name special senses. (a) Location of each.

Ans. Touch, in the tactile organs of skin and mucous membranes; smell, in the lining of the upper portion of the nose; sight, in the eye; hearing, in the auditory organ of the internal ear; taste, in the nerve endings of the tongue; temperature sense, in certain nerve endings in the skin and mucous membranes.

12. What is the diaphragm? (a) Where located? (b) Name organs immediately above and below.

Ans. A thin, dome-like muscle, separating the thoracic and abdominal cavities.
(a) From the ensiform cartilage in front to the second, third and fourth lumbar vertebrae behind. (b) Above: lungs and pericardium. Below: liver, stomach, colon, spleen, kidneys.

MEDICAL NURSING AND HYGIENE.

Examination at Montpelier, Vt., November 13, 1913.

Answer 10 questions only.—Dr. D. C. Hawley.

1. Describe in detail three methods of taking temperature.

By mouth: the thermometer is placed under the tongue and well inside the mouth, and patient breathes through the nose, if possible. Care is taken that the patient does not eat or drink for about five minutes preceding. The thermometer is kept in place long enough to get the exact temperature, the time varying according to the instrument used. By rectum: The thermometer is inserted in the rectum so that the mercurial bulb passes above the sphincter, and is kept in place as long as in taking temperature by mouth. method is not used for some time after giving an enema, and care must be taken that the instrument does not penetrate a fecal mass instead of coming into contact with the rectal mucosa. By axilla: The axilla is wiped until free from perspiration, the thermometer inserted, and the arm crossed firmly over the chest; the time is about twice as long as in taking temperature by mouth.

- 2. Define the terms toxin and antitoxin. Ans. A toxin is any poisonous albumin or base of bacterial origin. An antitoxin is any substance developed in the body as a result of the presence of a toxin, and capable of defending the body against the toxin.
- 3. What is acute nephritis? Name two causes. Outline briefly the treatment.
- Ans. Acute inflammation of the kidney. Scarlet fever and diphtheria are causes. Rest in bed, milk diet, sweating, purging, and appropriate diuretics.
- 4. Define diphtheria. State cause, two frequent complications and treatment.

Ans. An acute, infectious disease caused by the Klebs-Loeffler bacillus and causing a false membrane, or growth of bacteria, which may be on any mucous surface or on the skin; this is attended by fever and constitutional symptoms affecting almost any organ. Bronchopneumonia and nephritis may complicate. Isolation, milk diet, local treatment of nose and throat by antiseptics, and prompt use of antitoxin.

5. Define massage and state four objects or purposes for which it is practised.

Ans. Systematic rubbing, stroking, kneading or striking of any part of the body, for therapeutic effect. To improve the circulation; to remove adhesions; to give tone to the muscles; to hasten absorption of exudates.

6. Draw fever chart illustrating typical case of typhoid fever.

The reader is referred to any good book on medical practice.

Name four methods by which disease germs are spread.

Ans. Dust, fles, mosquitoes, contact with infected persons.

- 8. Of what is air composed? How does it become contaminated and how again purified? Where is the purest air found?
- Ans. Nitrogen and oxygen, with negligible amounts of other ingredients. By the presence of injurious gases and vapors in various industries, and especially by breathing and rebreathing, coughing and sneezing. At great altitudes and on bodies of water at a distance from land.
- 9. (a) Name the essential qualities of potable water. (b) What disease is most commonly attributable to impure water?
- Ans. (a) It is clear, colorless, odorless, palatable, and contains a minimum of organic and mineral matter. (b) Typhoid fever.
- 10. In nursing acute communicable diseases what precautions would you take to prevent (a) your own infection; (b) carrying the infection to others?
- Ans. (a) Keep yourself in robust health to maintain a good resistance to infection. Protect yourself by such measures as vac-

cination against smallpox and typhoid, and immunization against diphtheria when necessary. Keep yourself as clean as possible at all times, especially washing your hands frequently while at work. Avoid breathing air contaminated by the sneezing or coughing of the patient. Ventilate the sick room thoroughly, your own room also. Never eat anything in the sick room, or without first washing your hands and face. Keep your teeth clean, and cleanse mouth, nose and throat with mild antiseptics if exposed to infection. If avoidable, do not sleep in room with patient. Wear a special gown for protection when working over (b) Besides observing the the patient. above precautions, do not leave the patient's house to exercise or visit, without making a complete change of outer garments, and washing yourself. The best rule is to quarantine yourself as well as the patient.

11. Describe in detail preparation for and method of giving a vaginal douche to a ward patient in bed, including all articles needed, quantity and temperature of the douche, etc.

Ans. Everything used in this procedure should be well sterilized, by boiling when possible. Roll the patient's night dress above her waist, let her lie on her back with knees drawn up, and place a douche pan under the buttocks. Cleanse the vulva

and thighs with sterile water or antiseptic solution. Pour two quarts of sterile water or solution at a temperature (measured) of 105° to 110° Fahr. into a douche can or fountain syringe provided with sufficient length of rubber tubing leading to a glass douche tip 6 or 8 inches long. After expelling the air and cold water from the douche tip, insert tip gently about six inches into the vagina, separating the labia first so that the tip does not touch anything but the vaginal canal while you are Place the douche can not. inserting it. more than two feet above the level of the bed and let the water run slowly. After douching, remove the nozzle from the vagina, and dry the patient with a sterile towel.

12. What is the proper temperature of a patient's room or of a hospital ward, and how would you keep same at average temperature and provide for ventilation?

Ans. About 63° to 68° Fahr., for most cases. There should be an ample supply of heat from radiators, air ducts, or stove, which should not be allowed to run too low; temperature should be observed and recorded on a chart every four hours, unless there is a self-registering thermometer. If there is no ventilating system, windows and doors must be used to supply fresh air and moderate the temperature, taking care to avoid currents directly upon patients.

OBSTETRICAL NURSING.

Examination at Montpelier, Vt., November 13, 1913.

Answer 10 questions only:

- 1. Define ovulation, conception, embryo, extra uterine pregnancy, lactation.
- 2. Define abortion, miscarriage, premature labor.
- 3. When during pregnancy does the fundus uteri reach (a) the symphysis pubis; (b) the umbilicus; (c) the ensiform cartilage?
- 4. (a) What is vertex presentation in labor? (b) What is the normal or first or most common position?
- 5. Name three micro-organisms which may be the specific cause of puerperal infection.
- 6. Describe the birth of a baby (a) the power which forces it out; (b) the bony canal through which it passes; (c) the soft

parts it passes; (d) the change in the manner of oxygenation of the blood immediately after birth.

- 7. Give general rules for feeding a baby, i.e., quantity at each feeding, intervals between feedings, number of feedings in 24 hours and total amount in 24 hours, during first week, second week, sixth week and sixth month.
- 8. Define and give directions for practising gavage.

- 9. What is the most frequent cause of digestive disorders in hand fed babies?
- 10. What is citrated whole milk, and what are some of the advantages claimed for its use?
- 11. What danger is there in the use of the vacuum bottle (thermos bottle) for keeping infants' food hot?
- 12. What is the Bacillus lactis Bulgaricus? For what purpose is it sometimes given in connection with the bottle feeding of infants?—Dr. D. C. Hawley.

SURGICAL NURSING AND BACTERIOLOGY.

Examination at Montpelier, Vt., November 13, 1913.

- 1. Give minute directions for preparing your hands for a surgical operation.
- 2. When is drainage used and why? (a) Name four methods and material that may be employed.
- 3. How would you care for and prepare a patient during twenty-four hours before an abdominal operation ready for the surgeon?
- 4. Define the words (a) sterile; (b) asepsis; (c) disinfectants; (d) sterilization;
- (e) What is most effective?
- 5. What is an ideal chemical disinfectant? (a) Name four chemical disinfectants.
- 6. How would you remove a foreign body from the ear? (a) What precautions should be observed?
 - 7. Name four ways to stop hemorrhage?

- (a) How would you stop hemorrhage in foot or hand?
- 8. What is normal salt solution? (a) Give formula. (b) When and why used?
- (c) Describe different ways it is used.
- 9. What is the difference between fracture and dislocation? (a) Define a compound fracture.
 - 10. Name the germ in a septic wound.
- 11. Define a burn of first degree. (a) a burn of second degree. (b) a burn of third degree.
- 12. Give three different kinds of hemorrhage. (a) How distinguished.

Name each answer and letter each subdivision. Do not write the questions.—Dr. Gale.

Have your answers to these questions ready for comparison with the answers to be given in a later number of THE GAZETTE.

HIS COLOR SCHEME.

A green little boy, in a green little way, A little green apple devoured one day; And the green little grasses now tenderly wave

O'er the little green apple boy's green little grave.

-Exchange.

CHANNELOLOGY.

"FATHER, is a vessel a boat?"

"Er-yes-you may call it a boat."

"Well, what kind of a boat is a blood-vessel?"

"It's a lifeboat. Now run away to bed."

—Ex.

TECHNICALITIES

ITEMS of value to nurses in their work will be welcome to this column

To Remove Wet INK STAINS.—Rub with a piece of ripe tomato and then rinse well in cold water; wash and boil, or put a little red ink on the mark and wash; the acid dissolves the iron in the ink and sets free the tannin or coloring matter, which will boil out.—Nursing Times.

GETS DRUNK ON BEEF TEA.—Liverpool physicians are interested in the case of a travelling salesman who shows every sign of alcoholic poisoning, although he is a teetotaller. His illness is ascribed to the excessive drinking of beef tea and other meat extracts, and the physicians believe that this indicates that nitrogenous stimulants have an effect on the system similar to that of

alcohol.—Od Quarterly.

A SOAP PASTE USEFUL FOR PURPOSES OF LUBRICATION.—A. Labat, in Journal de médecine de Bordeaux for May 17, 1914, refers to the fact that the lubricant preparations in general use for vaginal and rectal examinations are usually of fatty nature and can be removed from the fingers or gloves only by vigorous brushing with soap and water. The following combination not only possesses the unctuous consistence of petrolatum, but can be removed by merely washing the fingers or gloves with water:

Saponis pulveris ...3viss (25 grams)
Glycerini3xiss (45 grams)
Aquæ destillatæ ...3xviss (61 grams)

M. et ft. pasta.

The soap is dissolved in the mixture of glycerin and water on a water bath. The whole is then poured into a mortar and beaten up for some time until a homogenous paste is obtained. The paste is then kept in sterile containers.—N. Y. Med. Jour.

IRRITATION From Lotions.—Lotions, mildly antiseptic and soothing, occasionally cause irritation, and the cause, or at least one cause, is not far to seek. It is due to the evaporation and concentration of the lotion, so that a lotion of, say, 2 per cent. carbolic acid may become by evaporation 50 per cent. upon the skin, if there be no discharge or other substance to neutralize its caustic action. When, therefore, lotions intended to evaporate are applied frequently, especially on bandages or lint. they should be well diluted, and water should now and then be allowed to take the place of fresh wetting with lotion. This is a point which nurses will do well to remember.—British Journal of Nursing.

A MAGNETIZED NEEDLE HOLDER.—C. M. Stimson, Philadelphia, finds that a magnetized needle holder is quite useful in locating needles or pieces of needles in the course of operations. Such a needle holder may save, therefore, a little time. Any needle holder may be magnetized by placing it on a dynamo for three or four hours. The magnetic properties are not affected by boiling.—Amer. Journal of Surgery.

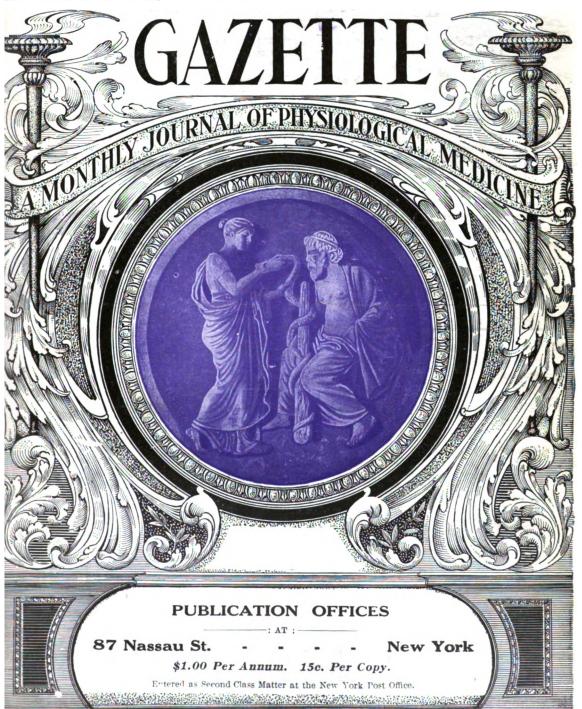
THE REAL CORNISH PASTRY.—Miss Tait McKay kindly sends the following recipe asked for by a correspondent: Make a good suet crust, roll out thin in a round shape. Get 1 lb. of beef (lean), six peeled potatoes about the size of an egg. three potatoes and lay across the centre of crust; pepper and salt to taste. Cut the beef into small dice and lay on the top of the potatoes; pepper and salt to taste. Slice the remainder of potatoes, lay on the top of beef; pepper and salt to taste. Gather up the edges of crust and join together on the top by manipulating with the finger and thumb into a crinkled edge almost in the middle, but rather more to one side. This crinkle is considered rather a work of art, and is not so easy to do as it looks.—Nursing Times.

THE SUGAR TEST OF WATER PURITY.—It is sometimes useful to be able to obtain an idea of the purity or otherwise of a given water supply without incurring the expense of a full chemical and bacteriological anal-Among the constituents of sewage ysis. are phosphates in comparative abundance. If a clear-glass bottle is nearly filled with the water to be tested, a lump or two of sugar added, and the whole corked tightly and placed in a sunny place for two or three days, the water should remain quite clear. If, however, it contains phosphates in excess, a milkiness will have developed in it, in which case the suspicion of contamination would be sufficiently confirmed to warrant a full analysis of the water supply before any more of it is used for drinking purposes.—Od Quarterly.

RAW BEEF TEA.—2 oz. raw lean beef, two tablespoonfuls cold water, pinch of salt. Cut the fat and skin from the meat and shred it finely. Put the water in a basin with the salt, add the meat, and leave them to soak for two hours. Strain through a fine strainer and serve in a colored glass.

-Nursing Times.

THE DIETETICAND HYGIENIC



The best antiseptic for purposes of persunal hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous and of agreeable odor and taste. Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teet!..

As an antiseptic wash or dressing for superficial wounds, cuts, bruises or abrasions, it may be applied in its full strength or diluted with one to three parts water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY LOCUST AND TWENTY-FIRST STREETS :: ST. LOUIS, MO.

FOR 21 YEARS ARSENAURO

HAS SHOWN IT-SELF TO BE THE MOST ASSIM-ILABLE FORM IN WHICH ARSENIC CAN BE TAKEN

(WITHOUT CAUSING STOMACHIC DISTURBANCE).

100 PAGE PAMPHLET OF CLINICAL REPORTS TO ANY PHYSICIAN-NEVER TO THE LAITY.

PARMELE PHARMACAL CO. 54 South St., N.Y.

Digitized by Google

THE

DIETETICAND HYGIENIC GAZETTE

A Monthly Journal of Individual and Public Health.

EDITED BY JOHN B. HUBER, A. M., M. D.

Vol. XXX.

DECEMBER, 1914

No. XII

Dr. Huber's Editorship of The GAZETTE ends with the present issue.

EDITORIALS.

VACCINATION AGAINST SMALLPOX.

THE only way to realize what vaccination has done for mankind is to recall the state of civilization before Jenner's demonstrations some six score years ago. Neither cholera, plague, syphilis, malaria nor camp diseases, howsoever gruesomely picturesque in their ravages, were before this time so persistently the cause of suffering, of disaster, so malignantly fatal.

"Philosophic historians" have almost invariably failed of just portrayals of human epochs because they have not gauged-indeed, they have, the most of them, not troubled themselves to consider—the sinister influence of disease on ethnic destinies; how epidemics have vastly affected the political, social, moral and economic aspects of civilization; have played, like the typhoon with a dory, with the wisest statesmanship; have wrought far more havoc than any ordnance; have brought about degenerations of superb peoples. worth stating here because history is most cruelly prone to repeat itself, whenever the factors that have in the past worked for untoward events are ignored as fatuously as do our present day anti-vaccinationists. No one expects that their persuasions shall widely prevail among our people. as we shall see, their influence has within the year been deplorably pernicious. Thomas Jefferson, in lauding Jenner, prophesied that

"future generations will know by history only that the loathsome smallpox has existed"; the common sense of our own generation, by reviewing history, should fend us against recurrences of the dreadful past.

We are here, therefore, essaying an exposition of the nature of vaccination; and to demonstrate that if we are not again to endure fhe mediæval horrors of smallpox, no other preventive measure will take its place.

Smallpox probably afflicted mankind long before Homer, or Moses or Hammurabi. It spared no race, any age or either sex; no climate or soil or housing conditions availed against it. If its genesis and spread were akin to those of cholera and the plague, smallpox was born by terrible old Mother India and was carried Mecca-ward by Mohammedan pilgrims. No incompetence of commanders, no lack of the machinery of war, of soldiers or of valor, raised the siege of Mecca in 568 A.D.; but this pestilence, which destroyed the besieging Abyssinian army. Thence smallpox spread through the Caspian region northward and westward into Africa. In like manner did the returning crusaders bring with them from the Holy Land that Eastern gift by which up to the eighteenth century whole nations were decimated, whole cities depopulated, towns and villages wiped completely out of existence.

Before Jenner smallpox was commoner than measles and much more fatal. Almost everybody had it before adolescence; parents exposed their children to variola, accepting hopelessly the risk of death, of total blindness, of hideous disfigurement for life. Sixty millions died of smallpox in the eighteenth century alone; whilst every other passerby on the thoroughfares was pock-marked. In Iceland in 1707, eighteen thousand were destroyed in a population of fifty thousand; in Greenland in 1734 nearly two-thirds of the population.

Great epidemic years were succeeded by periods of lessened prevalence only because the susceptible human material was for the time being exhausted. Variola, to thrive, had to wait for the borning of fresh generations. Mainly a disease of childhood, its recurrence in the individual was rare, after the manner of infections generally; one attack, though not invariably, conferred immunity to future attacks. Thus then, the adult population of Europe consisted mainly of smallpox survivors. Indeed, officers of record were wont to make division into: those who had smallpox; those having smallpox; those who were going to have smallpox.

Most London children had variola before they were seven. In 1802 in the United Kingdom forty-five thousand were reported to have died annually of smallpox. No kind of environment, no seclusion guaranteed protection.

No station in life, no calling was respected; many royal personages succumbed. Our own Washington contracted smallpox in the West Indies. In 1776 smallpox broke out in Cambridge; "and there were scarcely enough men free of it to keep guard at the hospitals." The Boston epidemic of 1752 left but 174 exempts among 15,684 people.

Then came Jenner's offering to mankind: and it was "as if an angel's trumpet had sounded over the earth spreading the good tidings into all the lands, that a preventive had been found against the horrible disease so long the scourge of humanity." And Macaulay:

"That disease, over which science has achieved a succession of glorious and benefi-

cent victories, was then the most terrible minister of death. The smallpox was always present, filling the churchyards with corpses, tormenting with constant fears all whom it had not yet stricken, leaving on those whose lives it spared the hideous traces of its power, turning the babe into a changeling at which the mother shuddered, and making the eyes and cheeks of a betrothed maiden objects of horror to the lover."

Jenner's discovery has indeed rendered the ghastly disease we have thus far considered into one so innocuous that a year ago in a city of above five million souls there was actually but a single smallpox death.

IS VACCINATION DANGEROUS?

Whatever dangers there are have been vastly magnified by anti-vaccinationists; such dangers are infinitesimal by comparison with the benefits of vaccination. And what sane individual who has to choose will hes-Nowadays, indeed, with our improved quality of vaccine and our aseptic methods a bad arm is rare, serious complications are still rarer. Yes, the vaccination becomes an open wound, subject to the dangers of any wound. As well, however, prohibit, as well forego, all surgery, all operations for human relief. For that matter a pin prick or a razor scratch has proven not only dangerous, but fatal. Practically all danger of vaccination comes after the operation and from uncleanliness and the lack of proper precautions. Whenever the directions every family physician will give, or which any health department will supply are followed there will be no untoward results.

How frequent are the dangers? In Germany, during thirteen years more than 36 million children were vaccinated. Of these 115 died within a few weeks or months after the operation, presumably of injuries incident to the operation. Of these 115 it appears that at least 48 did not die as a direct result of the vaccinations. More recent records are still better; it is now exceedingly rare for a death to be recorded as directly due to vaccination. In the Philippines our government surgeons vaccinated 3,515,000 persons (the most of them not noted for balneal proclivities) without a single death or any serious post-vaccinal complications.

COMPULSORY VACCINATION.

THE laws and regulations relating to vaccination in our several States are not uniform. Massachusetts was, in 1809 the first State to enact vaccination legislation. Decisions in the various courts of the United States have held vaccination to be legal, as when the validity of the Massachusetts statute, questioned under the Constitution, was upheld in the Supreme Court at Washington: "The liberty secured by the Constitution of the United States does not impart an absolute right to each person to be, at all times and in all circumstances, wholly free from restraint. Real liberty for all could not exist under the operation of a principle which recognizes the right of each individual person to use his own, whether in respect of his person or of his property, regardless of the injury that may be done to others."

It would indeed be ideal if all would submit voluntarily to vaccination and revaccination; but experience has proved this plan to have failed, as in England, where the "conscientious objector" has to a serious degree nullified the benefits of vaccination. Compulsory vaccination gives the best results; whilst notification, isolation, quarantine and disinfection are adjuvant, vaccination is the only real safeguard.

Germany has from 1874 had com pulsory vaccination. There have since been no epidemics of smallpox in the Empire. although the disease has been frequently introduced from without, especially from Russia. In 1897 there were but 8 smallpox deaths among the fifty-four million German Since 1897 long periods have passed without a single variola death. Since 1874, in the huge German army, where discipline is inexorable there have been only two deaths from smallpox, one of these of a reservist who had not been successfully vaccinated. Compulsory vaccination has averaged 1 to 3.5 smallpox deaths per mil-Belgium, Russia, Austria, Italy, Spain, without compulsory vaccination. have averaged respectively 164, 231, 510. 536 and 963 smallpox deaths per million of population.

THE SINS OF THE FATHER.

Twelve per cent. of human sickness today arises from diseases growing out of the social evil. Fully eighty per cent. of the young men who sow wild oats become physically tainted and carriers of loathsome infection. Wives and children reap a ghastly share of the wild-oat harvest. Thirty-three per cent. of the deaths of children under six months; eighty per cent. of the blindness of new-born infants; twenty-five per cent. of all blindness; eighty per cent. of the diseases peculiar to women; seventy-five per cent. of all surgical operations performed on women; over sixty per cent. of the work done by specialists in diseases of women; all these are the result of hideous infections thus most innocently contracted.

It is the solemn duty of all parents to advise their adolescent sons of such facts as these; of all physicians to do the like with all the young men they can influence; of all teachers in personal touch with students who look to them for guidance; of all clergymen able to impress the potent influence of religion upon the consciences of the youths in their congregations. If such influences as these succeed none others, will be needed. If they fail none others will succeed.

ICED COLD TEA.—Let some of the beef tea get cold, put it in a basin, and set the basin inside a larger one. Break some ice into small pieces and fill the space between the two basins with layers of salt and ice. Let the beef tea stand for about fifteen minutes, then stir it up, repeat this, and leave till the beef tea is frozen.

A NATIONAL DEPARTMENT OF HEALTH.

THE GAZETTE has from time to time urged the creation of a National Department of Health with a cabinet officer at its head. In this issue appears matter entitled Lest We Forget from which, and from much else that has appeared in these columns in the like tenor, one may gather who THE GAZETTE considers should logically be the Cabinet Officer heading such a Department. The responsible medical profession has long been unanimous in urging to such ends; to which the American Medical Association and The Southern Medical Association have especially memorialized Congress. The Medical Press has faithfully worked We therefore with peculiar for them. gratification endorse the following ideas, as set forth in the Southern Medical Journal:

- 1. General Gorgas is recognized as the greatest sanitarian that the world has ever produced.
- 2. If the measures that he employed for the prevention of disease were even approximated in the United States there would be an enormous decrease of death rate as well as a decrease in general sickness.
- 3. There are approximately 500,000 people who die needlessly every year from diseases that can and should be prevented. The economic waste from this wanton loss of life is frightful. Therefore, the Nation's greatest need is an efficient department of health to aid the city, county and state public health authorities in protecting the health and lives of its citizens.
- 4. The United States Public Health Service is doing excellent work with its limited funds and scope. It should be enlarged and correlated with the Medical Corps of the United States Army and Navy, and devel-

oped into an adequate Department of Health.

- 5. The soldiers, marines and sailors should be trained as sanitary inspectors to be used when called upon, as in epidemics or at any time, by the city, county or state public health authorities. This would make the Army and Navy an asset to the Nation in times of peace; and, since in war diseases kill more soldiers than bullets, if the soldiers, marines and sailors were trained in sanitary matters they would save the lives of thousands of their comrades.
- 6. By connecting the name of Surgeon General Gorgas with the proposed Department of Health it would popularize the movement because every one would know that General Gorgas would get results. Besides the Nation owes him greater honors than has ever been accorded to any member of the Medical Corps of the United States Army. Congress should first make him a Major General and allow him to retire with that rank and if a Department of Health is created the country would look to President Wilson to make him Secretary of Health.

Since men for the most part follow in the footsteps and imitate the actions of others, and yet are unable to adhere exactly to those paths which others have taken, or attain to the virtues of those whom they would resemble, the wise man should always follow the roads that have been trodden by the great, and imitate those who have most excelled, so that if he cannot reach their perfection, he may at least acquire something of its savor. Acting in this like the skillful archer, who seeing that the object he would hit is distant, and knowing the range of his bow, takes aim much above the destined mark; not designing that his arrow should strike so high, but that flying high it may alight at the point intended.

Good ethics, then, is to be found among surgeons who, following the teaching of Hippocrates and Aristotle, of Celsus and Galen maintain that he is the upright scientist who pursues his art by the light of sound reason; who draws his conclusions and guides his practice by deductions founded on accurate observation, who observes that clear inductive method which is older than history; who abhors exaggeration and pretence; who practises square dealing; who conducts himself toward his fellows and toward the public as a generous and honorable man.—James G. Mumford, Clifton Med. Bull.

VOLUNTARY SANITARY STANDARDS IN INDUSTRY.

EVERY new sanitary regulation of industry, observes the Bulletin of the Health Department of New York City, is denounced by well-meaning individualists as an invasion of personal liberty. In a society composed wholly of enlightened and altruistic individuals, there would be little need for legislation of this kind; but under present conditions those who advocate the adoption of restrictive laws usually do so in the belief that carefully considered social legislation tends, in the long run, to increase the value of human life and to promote the welfare and progress of the race.

While individualists believe that regulative legislation has been overdone, the voluntary organization and successful activity of such a body as the Joint Board of Sanitary Control of the Cloak, Suit and Skirt Trades, and the Dress and Waist Industries of New York City—in other words, the banding together of employers and employees, in a huge industry, for the sanitary regulation of its manufacturing establishments—is an indication that in some quarters, at least, the need is recognized of establishing working standards over and above those which are legally enforced. If employers and employees in large industries generally would get together in this way the work of social reformers would be largely supplanted, and the activities of boards of health and of other state and municipal departments would be materially diminished. Among the commendable sanitary rules which have been voluntarily adopted by the Joint Board of Sanitary Control are the following:

- 1. No shop to be allowed in a cellar.
- 2. Fire-proof receptacles, lined with tin

and having a tin cover, to be provided in sufficient numbers for rubbish.

- 3. Halls and stairways leading from shops to be adequately lighted by natural or artificial light.
- 4. Sufficient window space to be provided for each shop, so that all parts of the shop are well lighted during the hours from 9 a. m. to 4 p. m.
- 5. Where gas is burned, arc lights or incandescent mantles should be used.
- 6. All lights to be well shaded, to be placed above operatives, and not too near them.
- 7. At least 400 cubic feet of space, exclusive of bulky furniture and materials, should be provided for every person within the shop.
- 8. The shop should be thoroughly aired before and after work hours, and during the lunch hour, by opening windows and doors.
- 9. Walls and ceilings of shops and watercloset apartments should be cleaned as often as necessary, and kept clean.
- 10. Floors of shops, and of water-closet apartments, to be scrubbed weekly, swept daily and kept free of refuse.
- 11. Water-closets to be adequately flushed and kept clean.
- 12. A sufficient number of water-supplied wash basins to be provided in convenient and light locations within the shop.
- 13. All waste materials, cuttings and rubbish must be removed twice a day from the floor of the shop and once a day from the building.
- 14. In all shops where more than twenty-five women are employed, provision should be made for rest and emergency rooms for their use.

The Food Problem.—It must always be kept in mind in discussing pure food problems that the public has two vital interests at stake. It must be protected against foods definitely proved to be dangerous to health; but it is quite as essential that it should not be robbed of any safe foods on account of unreasoning prejudices. The use of the milk and meat from cows slightly affected with tuberculosis is a case in point.—C. E. A. Winslow

The Greatest Waste.—In any business, intelligent management attacks and eliminates waste. The government is a gigantic business enterprise, with an implied purpose of far greater import than dividends in money or stocks. Sickness is waste. The death-rate in the cities of this country is 15 per thousand; in rural districts 10 per thousand. This can be cut in half.—Dowling, in Bull, Texas State Board of Health.

KITCHEN EFFICIENCY.

THE Department of Agriculture recently stated that the rural housewife of a century ago, with her fire-place cooking and her log cabin, was better provided for than is the housewife of to-day. Whilst the twentieth century husband has added countless mechanical appliances to lighten his work and whilst her children have escaped to the city, the twentieth century rural housewife has to go on drudging under virtually unchanged conditions.

Nor is her city sister so very much in advance of her. For example, Christine Frederick has observed in the *Review of Reviews* (February '14):

One evening, several years ago, when without a servant, I counted the number of pans, pots, and dishes I was washing, there were eighty-seven in all. I timed myself on this unpleasant old task, which I hated from the bottom of my heart, and found it took forty-five minutes to wash, dry, and lay them away. When I was through I was so heated and tired that I didn't feel like doing anything else all the evening.

Yes, every kind of work has its element of drudgery—but is there anything to equal kitchen drudgery—which is endured because of the fatalistic impression that it cannot be relieved. Yet every other form of activity—transportation, chicken-raising, education, bridge-building, government—has been improved in recent decades. Why not cooking, then. Is not scientific management applicable here as elsewhere? "Three years ago I grasped this idea," declared Mrs. Frederick: "And I can say that it has revolutionized my entire thought and practice about my home, and convinced me

that a new era for woman's work—traditionally never done—is coming."

One of the first things she discovered was that the materials with which she worked were not right. "I cramped my back over a sink twenty-eight inches high, when I am a taller woman than the average and need to work on a surface at least three inches higher." Accordingly she devised a tabular scheme to show the proper height of the working surface (including that of the above) for women of any height. And she eliminated stooping by having dust-pans, etc., with longer handles.

Then Mrs. Frederick discovered that the sink, the tables and the stove were in a wrong relation to one another. To set these things right she first analyzed the kitchen work, and found it could be divided into two groups of processes: preparing the meal; and clearing it away. Then she built up the subsidiary processes in a logical time -and energy-saving order, which she has illustrated by diagrams. Eighty per cent of household inefficiency she attributes to six causes, reducible to five by combining the first two. Thus: Not having all the needed tools or utensils at hand at the beginning of the task; wasting time and effort in walking to, hunting for and bringing ingredients and tools; stopping in the middle of one task to do something else quite unrelated; losing time in putting away tools or work owing to poor arrangements of kitchen, pantry and closets; using a poor tool or a wrong one; not keeping sufficient supplies on hand, with tools in poor condition. The simple fact seems to be that kitchen efficiency is as yet an infant art

Constructive Medicine and Good Housing.—We have done great things, and in the doing of them have created a new profession, that of preventive medicine. Since the days when the physician was content to cure those already sick to these days when the physician, whatever his technical titles, labors to keep men from becoming sick, we have advanced far. But perhaps the time has now come when we must create another profession, that of "construc-

tive medicine." Its field may be even larger than the field of preventive medicine, the multitude of its practitioners divided into a greater number of groups that those who now guard our food, our water, our air and our neighbors from infection and contagion. And one of its tasks will be to see that our houses are adapted to serve as family homes. For that is what good housing means.—John Ihlder, Amer. Jour. Pub. Health.

ORIGINAL ARTICLES.

HYGIENE FOR WOMEN.

BY RALPH WALDO, M.D., F.A., C.S.

Lecture Given at Lebanon Hospital Training School, April 8, 1914.

It is impossible to discuss any branch of Hygiene without first reviewing the subject in general.

Hygiene is the science, Practical Hygiene the art, of preserving health. The name has been adopted from the French; it is derived from the Greek, hygeia, health.

Writings on health are among the oldest in the world. The subject has engaged the attention of the profoundest thinkers and the most renowned leaders of men. have only to note the elaborate Mosaic laws for the preservation of health through scrupulous attention to cleanliness, the isolation of the sick, and the extreme care in the use of wholesome articles of food and drink. Throughout the whole of their history, the Jews enjoyed a remarkable immunity from epidemic disease, the most of the instances in which such disease occurred being those in which they departed from the law and relaxed the wholesome vigilance enjoined by it.

It is the province of hygiene to seek out and determine the cause of disease; and then to formulate rules for its preservation and removal. The progress of hygiene, such as it was, rested for many ages on an empirical basis, and to a large extent this is the case at the present time.

The ancient Greek taught that to have a sound mind you must have a sound body, and that you must have pure air, pure water, and good food; and in Sparta where this teaching was developed to the highest degree the children were taken from their parents at an early age, and thoroughly trained and developed—the boys and girls separately. Later healthy young men and women were married; and if healthy children did not result they were separated and

the unhealthy partner was not allowed to remarry. Physicians were not allowed to treat chronic diseases; but only acute diseases and injuries. As far as we know the human race was physically better developed during this period in Greece than it has ever been before or since in the history of the world. During this period Greek culture made the enormous development that the world has copied since.

With this little historic review of hygiene in general we will pass to the immediate subject of the evening.

Hygiene of Women is the most important branch of the subject, for on it rests the future welfare of the human race. In order to correct an evil, it must first be recognized, not by a few individuals but by the public; and its gravity thoroughly appreciated. I am informed by the superintendent of one of the large state insane asylums that within the state of New York there are confined in either public or private asylums, 100,000 patients and that there are 100,000 more insane people kept at home; in all 200,000 insane people in New York This number is increasing so rapidly that it is almost impossible to house the new patients who are continuously applying. Please don't understand me to mean that this frightful condition is due entirely to the poor health of the women of the State; for it is not.

In many of the savage tribes of the world there is very little difference in the physical development of the men and women. This is largely the case with the peasants of Europe.

It would seem that largely, but not entirely, our world is peopled by the ignorant, superstitious and poverty stricken; and

classes in which the women labor out of doors. It is said of an Indian woman that when she was upbraided for laboring for her husband she answered that she was proud to be able to. During the early age of boys and girls the girls are fully as strong as the boys and then at ten or twelve years of age they are heavier and not infrequently their physical superiors.

If the proper hygiene is followed is it not possible to maintain this physical equality through life? I believe that in the main it is. We all know of instances of women with powerful muscular development, and while this is largely in the laboring classes there are instances in the higher walks of society.

Just here it is well to remember that there are more boys than girls born and that there are more women than men in the world. In other words, the mortality is greater among men than women. This is so during all ages excepting a short period during the child-bearing age of women.

A girl passes through a very critical age and if she is not properly cared for during this period she is very apt to be more or less of an invalid during the remainder of her life.

The little girl is apt to be plump, well developed and fancy-free until she reaches from 12 to 16 years of age. At this age she should largely associate with children of her own age, her education should be of the simplest, her brain should not be taxed, her food should be simple, nourishing and not stimulating; she should drink freely of water or milk and under no circumstances should she be given tea, coffee or alcohol in any form. She should go to bed early and have no excitement or amusement that adults indulge in. clothing should be simple, and appropriate to the weather, she should sleep in well ventilated apartments. As far as possible she should live out of doors and have simple out of door occupation or amusement. Her studies should be simple but never exacting. She should never practice for hours at a time on a piano or any other musical instrument. She should not be allowed to spend her time reading trashy novels; or to go to theatres or moving picture shows. When in the house the apartments should be well lighted, ventilated and heated during cold weather.

Our cities are recruited from the country. In the country the opportunities for the excitement of children are few. Young girls should be subjected to mild discipline; but they should not be harassed. They should be given work to do; but they should not be overworked or severely disciplined when they make mistakes.

As the girl begins to develop she should be carefully watched and when she menstruates should at first be kept in bed during the first day and kept warm and not excited a day or two before and during the entire time of her menstrual flow. Under no circumstances should she go to school while menstruating. Our system of educating girls during this period of her life is very faulty. Many times if the brain is called into active operating by excitement, work or any severe mental exertion, the nerve force and blood is taken from the uterus and ovaries during their development; and the development is largely arrested. This in time results in painful menstruation. congestion. stipation, dyspeptic disturbances and general malnutrition. Many times in going over the history of a woman suffering from chronic internal disease, I find that she was at the head of her class; that she took honors at her graduation; and shortly after was the sufferer from chronic uterine disease and gradually became a nervous and physical wreck. Does this pay?

I am not arguing against the education of women; but I do object to the method that is frequently followed.

If as the menstrual function gradually becomes developed study is also gradually extended, all that is desired will be accomplished; and if the young woman wishes an advanced education, it can be obtained at the sacrifice of only a little time, and not at the sacrifice of health.

Girls should not wear corsets and the clothes should be supported from the shoulders rather than by bands around the waist. This is so that the abdominal muscles should be free to act and so become developed. This is most important not only for the child but also for the woman who is to follow. Much of the constipation from which women so generally suffer would be prevented if abdominal muscles were thoroughly developed. The bowels should be kept regular by appropriate diet and hygiene and if this can not be accomplished simple remedies should be administered in such quantities as to produce as near as possible, one normal evacuation each day; and it should be arranged to have this action at the same time each day. In this way a habit is acquired and it will not be necessary to continue the laxative. family physician should be consulted on this subject. Chronic constipation causes a congestion of all the pelvic organs and is one of the most frequent causes of arrested development of the uterus and ovaries. A girl should marry so that her first child should be born not later than her twenty-fifth year. On the other hand, she should not marry before she is thoroughly developed, which is usual at about twenty years of age. In the past it has been quite generally believed that marriage was the cureall for uterine disease in young wom-If there is painful menstruation due to too small an opening in the mouth of the womb or to an anteflexion (a bending forward of the uterus), the birth of a child will stretch the opening and so cure the painful flow; but in a large percentage of cases these women can not become pregnant and when that is the case marriage does more harm than good. If there is inflammation of any of the pelvic organs the woman should not marry, and when there is the slightest idea that any uterine disease is present a physician should be consulted and if disease is found the girl

should not marry until after it has been cured. The lives of many women have been made miserable by marrying when disease of the pelvic organs was present. A woman should have a child as soon after marriage as she can. On the average the children of young adults are much stronger than those of old people and the children are carried with less discomfort and delivery is much easier. The first child should be born between the ages of 20 and 25. There are exceptional instances where the first child comes with very little discomfort at a much older age. During pregnancy the woman should not be subjected to severe mental or physical strain; but should follow their ordinary vocation and take a fair amount of out of door exercise and eat freely of simple nourishing food. Under no circumstances should either men or women indulge excessively in any form of alcohol during the child bearing period. Many idiots and mentally weak children result from the excessive use of alcohol by the parents. Neither men nor women who are suffering from chronic disease or who are mentally unsound should marry and I am in favor of making laws prohibiting marriage under these circumstances.

If a woman becomes pregnant she should carry her child if she can.

There is much superstition in medicine and more in the department pertaining to childbirth than any other branch. It is believed that a woman should remain in bed for nine days after the birth of her child and after this time she is able to go about and do as she pleases. This is one of the greatest fallacies in medicine. uterus that has taken nine months to grow will not contract to its normal size in nine days. In fact, under favorable conditions it will take about two months for it to contract down to its normal size. the increase in the size of the uterus there is an increase in the size of all of the parts associated with it and they must contract back to their normal size before it is safe for the woman to follow her normal vocation.

The old adage of two weeks in the bed and two weeks on it is a good one, and where this rule is followed there will be very little womb disease as the result of childbirth.

If possible a woman should nurse her child. It is much better for the child and for the mother. There is nothing that will cause the uterus to contract so strongly and permanently as a child at the breast.

Barring accidents a woman is healthier and better if she has a family than she is if she does not. A woman who gives birth to children is much less liable to have fibroid (hard tumors of the uterus) than one who has no children. This is especially the case where the women are married and have no children.

The uterus and ovaries are temporary structures in the human race. By that I mean that after a certain age they become small and to all practical purposes disap-With the contraction of these organs the menses or flow disappears and the woman passes through the menopause or change of life, as it is ordinarily called. This usually takes place between the ages of 45 and 50. In exceptional instances it may occur at a much earlier or later age. I have known women to change at 30 and others at 60 years of age. is a critical age in a woman's life, but it is not a disease; and if unusual symptoms as excessive flow or paining are noticed a physician should be immediately consulted. Ordinarily the woman will have a period of about five years in which she will have more or less hot flushes; and the menstrual flow will diminish in quantity and be irregular and finally disappear entirely. The nervous system is more or less disturbed, as indicated by hot flashes, general excitability or depression, for a varying time after the menses have disappeared.

If after the menses have entirely disappeared blood should be seen, no matter how small in amount, a physician should be immediately consulted for this is frequently the first symptom of cancer noticed Although as an actual fact this disease is preceded by a peculiar watery discharge. These symptoms occur long before there is emaciation or a foul smelling discharge. There may be an appearance of blood due to conditions other than cancer. If cancer is discovered or suspected by a competent physician, have an operation performed as soon as possible; for at first the disease is local and in a large percentage of cases can be cured. No time should be lost by waiting for spontaneous recovery to take place; and no faith should be placed in the X-ray, radium or any variety of serum treatment. As yet there is no evidence, in spite of repeated trial, that these deep seated growths are to the slightest extent benefited by any of these treatments. As radium has been so extensively advertised in the newspapers for the protection of women with beginning cancer of the womb it is necessary to state that a large percentage of radium salts that have been advertised and sold in all the large medical centers of Europe and America, on a thorough investigation of the U.S. Government at Washington, are found either to contain no radium whatever or a very small amount. Furthermore if the preparation of radium is good it will only benefit the superficial cancers that can and are cured in a very large percentage by almost any form of efficient caustic. The best observers believe that radium is a no more efficient remedy in the treatment of cancer in any form, than many other materials that act as a caustic.

54 West 71st Street, New York.

Who are the victims of appendicitis? One thing certain, you don't see it among the hardy, horny-handed sons of toil. Why? Because hard labor, plain, coarse diet, keeps the secretions active and healthy. Your man of leisure—clerks, book-keepers, stenographers; brain workers and all persons who don't do manual labor, are the appendicitis victims. Want of manual exercise,

riding everywhere, and walking none, causes intestinal torpor, indigestion, sluggish liver, and a general piling up of every eliminating function. Then, the food is a vital matter. If a person of sedentary employment indulges in an abundance of rich food, with meat, as a permanent article of diet, nothing can be expected of such but indigestion, constipation and many other ills.—Dr. Field.

THE FEEDING OF CHILDREN OVER ONE YEAR OF AGE.

By C. W. Canan, M.D., B.S., Orkney Springs, Va.

AT the end of the twelfth month the average well-fed or breast-fed baby should be weaned and other nourishment given. After this age, the baby if bottle-fed should gradually receive more than the milk and cereal, with which most children are fed. The food most suitable for the second year of life and the methods of its preparation and administration, are subjects upon which the masses at large are profoundly ignorant. At this period of life, we find a few children that are under-fed but with the great majority the trouble lies in their being over-fed. They are given unsuitable food, wretchedly cooked, at improper intervals and often in a very careless manner. Is it any wonder that there are so many badly nourished and forlorn looking children when we think of the great amount of indigestible food these children are given as a diet? We are all aware that summer diarrhoea and cholera infantum find its greatest number of victims among those over one year of age. Why is this? Enquiry in every case will reveal the fact that the patient had been allowed a broader line of diet, and in many instances various things that were wholly unfit to enter the stomach.

The dreaded second summer robs hundreds of homes of their precious little ones, because of ignorance and carelessness of those who select, prepare and feed these little tots. We want to say and say it with emphasis, that the second summer, managed properly, is of but little more danger than any other summer during child-life.

It has become an almost universal custom when the child is weaned, or given something other than an exclusive milk diet, to allow him to taste this and that from the family-table; very often these, "tastes" comprise the entire diet list of the family.

We have seen with our own eyes moth-

ers give their babies, ranging from 12 to 16 months of age, "tastes" of string beans, meats of all kinds and in fact anything indulged in by the parent. One of the worst things we know is to feed the baby, what is known among the ignorant class as "coffy soup." This is made from black coffee and home-made bread and sugar. The bread is never toasted, seldom is there any milk added and it is often sweetened until it is syrupy.

We have seen this fed to these little ones before they were twelve months old. It is amazing how much of this ("coffy soup," as they call it), is fed; and we know of nothing so likely to sour the stomach; time and time again have we seen these little ones vomit this sour ill-smelling stuff. We have seen many relapses traced directly to this line of diet.

In many instances not only is the food selected unsuitable, but it is given irregularly, and this is supplemented by feeding sweet crackers or cakes between meals.

Have you ever gone to church in the country and watched a dozen mothers or more open their hand-bags or satchels and give their babies those great round molasses cakes or sweet cakes of various kinds? The mother would not think of going to church without a goodly supply of this line of diet safely stored in her hand-satchel to keep the little fellow quiet during the service. If he cries or whines he is pacified with one of these big disks; if he wants water, or to get down the satchel is opened again. How often has the writer seen these little ones taken sick before the day was done.

During the hot months the gastro-intestinal tract is less able to bear the abuse that it is subjected to and the child becomes ill. If mothers would only consult their physicians as to their children's diet there would not be so many homes robbed of their precious darlings.

When the twelfth month is completed in an average child the mother or nurse should go to their physician and get a diet schedule and then begin cautiously, in order to learn the child's ability to utilize the food allowed.

Every new article of diet allowed the child should be carefully prepared and in very small quantities at first. The feedings should be at regular intervals with nothing between meals. Some children are thoroughly satisfied with milk and refuse all other forms of nourishment. With such children tact and patience are necessary.

In dealing with children of this kind the milk should be kept in the background and the more solid articles offered first.

Among the under-fed or poorly nourished, you will always find them to be children who have nursed too long or have been fed on an exclusive milk diet for too long a period.

A few years ago we canvassed personally, two hundred and sixty mothers who nursed their children. Out of this number there was less than one per cent. who could nourish her child at the breast exclusively to its advantage after it was one year old. The majority of cases of malnutrition met with during the second year, are found to be exclusively milk-fed.

These children are pale in color with a prominent abdomen and flabby muscles. They are generally cross, irritable and often have night horrors. Children ranging between 12 and 15 months should be fed five meals daily, beginning at 7 a. m.

and ending at 9.30 p. m. From 15 to 18 months they should be fed four times daily. The same number of feedings should be continued until the child is two years old. Nothing should be given between meals, this is very important: because, if this is followed the child will not eat sufficient at his regular meal time and the stomach will not get the desired rest which will lead to many stomach and bowel troubles.

In closing this paper we will suggest some of the safest articles of diet for the baby during his second year. These are oatmeal, barley, wheat jelly, one to two teaspoonsful in eight ounces of milk. All cereals selected should be cooked not less than three hours. Scraped rare beef, raw eggs or very soft boiled eggs. Brothsbeef, mutton and chicken with salt bread broken in.

When the child is older custard, corn starch, plain rice pudding, zwieback or bran biscuit. In the fruit line orange juice, stewed prunes, baked apple and apple sauce.

As the child nears its second birthday rare steak or rare roast beef cut very fine, spinach, asparagus tops, stewed tomatoes, strained, mashed cauliflower and a well baked potato. Bran biscuit with butter or stale bread and butter.

By using good judgment in selecting the articles best suited to his age, and to see that everything is properly prepared and the right quantity fed, there will be very few cases of serious bowel trouble or cholera infantum during the hot months.

And in thus acting the Romans did as all wise rulers should, who have to consider not only present difficulties but also future, against which they must use all diligence to provide; for these, if they be foreseen while yet remote, admit of easy remedy, but if their approach be awaited, are already past cure, the disorder having been hopeless, realizing what the physicians tell us of hectic fever.—Machiavelli.

What is Insanity?—What is vaguely called insanity—a term which physicians would gladly leave to the lawyer if he can use it—is really a wide range of greatly differing conditions and diseases all playing havoc with our organ and functions of conduct and behavior. Many too long neglected lines of research enter into it.—Adolph Meyer: The Purpose of the Psychiatric Clinic.

HISTORIC NEGLIGENCE OF REST.

By PHILIP GETSON, M.D., North Western General Hospital, Philadelphia, Pa.

I.

THAT rest is essential to life and health is an old, well known fact. The slightest bruise will heal reluctantly or not at all if the part be kept in constant motion. welfare of the individual, community, indeed, of the nation, may depend upon the amount and form of rest it can afford. This principle was clearly understood in times of yore and utilized not only by medical men but by patriarchs and founders of nations as well. Thus the first step toward the organization of the ancient Hebrew tribes was the establishment of the Sabbath -a national day of rest. The Christian Sunday and the Mohammedan Friday is based upon precisely the same principle.

Not health alone but culture and education as well depend upon the condition and degree of rest involved. A fatigued body must necessarily result in a fatigued and exhausted mind, and an exhausted mind cannot think.

Fatigue means overloading of the system with intermediary products of metabolism which eventually results in disease. Rest signifies elimination—its importance then is clear and needs no emphasis.

II.

In connection with the subject of rest, the so-called rest cures are worthy of some consideration. Rest cures of all kinds, rest cures purely so and rest cures disguised by names such as "Spas," various water cures, sanatoria, thermo-therapy, heliotherapy, etc., have been, with the advancement of medicine, appearing and spreading with wonderful rapidity, until, at the present time, they have established themselves securely and now occupy a prominent position in the field of modern medicine. They are, the rest cures, really the consequences of careful investigation and research.

Medical men have been pondering for centuries how to rectify or remedy some untoward conditions existing in or affecting

the human body and mind; they came to the conclusion that all that was necessary in a great many cases was rest-systematic and prolonged rest. They have simply "discovered" the well known but surprisingly neglected principle—the necessity of rest in order to affect a cure in various Not only this but they found that numerous affections result-either directly or indirectly through lowered resistance-from insufficiency or lack of rest. Hence the great success of the different forms of rest cures. The enormous chains of hospitals spread all over the globe are to a great extent nothing but rest cures, modified, at times, by drugs, surgery, diet and other specialized agencies.

III.

The beginning of civilization, as hinted above, really dates from the time the world had originally established a day's rest. A slave laboring seven days a week with barely enough sleep to be able to work can neither be well, work well nor think well. Rest permits the body to recuperate and the mind to think. Thus the originally established day of rest has given mankind its first impetus in the direction of culture and progress. The seed had been placed in the soil, and, obeying the laws of nature, began to grow. It grew and increased and spread, deviating in different directions until it started to burden itself-its own It overgrew, over developed and then started to decay, degenerate, defeat its original purpose as a result of its too great activity-just as certain bacteria die of their own poisonous products which they themselves develop after living together for a certain time.

To state it in clearer terms, it means this: Man rested. This improved the conditions of his body and mind. As a result, he began to think, work and create; but he failed, at the same time, to realize that an increased amount of rest is necessary to keep the human system in the improved condition; he failed to make the rest parallel the constantly increasing amount, kind and character of work. He neglected to reason out that rest must be in direct proportion to the products of body and mind; that just as every branch of life progresses, the conditions, amount and form of rest must progress also instead of regress as it did and still does due to the fact that it has been left in its primitive state—one day in a week. He forgot that just as rest improves the human machine, fatigue will deprove same.

He thus not only thought, created and worked, but he over-worked and over-taxed himself, forgetting that his power of work and creation was the result of adequate rest. He began to defeat himself with the products of his own creation. The resulting improvement in work, the fruits of his rest, were so numerous and heavy that they began to fall prematurely to the ground breaking the branches with them, indeed, to such an extent as to jeopardize the whole tree, aye, the root—the very seed that gave him (man) the first impetus of life, existence, progress.

IV.

Why is it then that for thousands of years we have been working, studying, inventing, keeping our nerves in a constant state of tension—anxiously creating more and more, improving every branch of life and yet not making the least effort toward improving our conditions of rest? Why is it that the ancient form of rest—one day in a week—intended to be just a start in this direction and to improve in proportion to the degree of work and progress of civilization has been so obstinately neglected and is still persisting in its primitive state?

Compare the life of the ancient man—easy, free from worry, unmarred by the burdens of civilization, roaming the woods and fields, enjoying the products of nature so abundantly supplied to him in a form ready to be consumed—to the life of the modern man, full of worry, anxiety, staggering under the problems of civilization,

competition, rapid locomotion, machinery, with its dangers, accidents, and the like. Is it not a thousand-fold more complicated and harder? Would it not be logical to presuppose that our rest ought to be proportionately improved to meet and counteract the constantly added strain? Yet the conditions of rest have not improved in the least, it is exactly now what it has been hundreds or thousands of years ago.

V.

Realizing, then, that this is an abnormal condition, we must realize that its effects should be equally abnormal. Just as overuse results in hypertrophy and disuse in waste-both abnormal conditions-so the insufficiency of rest extended throughout centuries and generations, must of necessity result in morbid consequences. action is followed by an equal and opposite reaction." This is a law of nature and holds good in the organic as well as in the inorganic realm. Every action whether physical or psychological is performed at the expense of the body tissues or their nutritive principles which, for want of a better understanding of the chemicobiologic principles involved, we call oxidation or burning up. This results in formation of waste products which are removed by the body fluids and diverse channels of elimination. If elimination equals production the system as a whole—the individual -does not appreciate any abnormal sensations. If the eliminative agents, however, cannot remove all intermediary waste products, fatigue or exhaustion results. really constitutes a warning that the tissues are overloaded with poisonous principles of work and that production of same is to be stopped so as to permit elimination to rid the system of the accumulated poison. If this be done, that is, if the individual rest sufficiently, the various tissues are freed of their undesired principles and the body is then said to have recuperated and becomes ready for work again. If not what results?

VI.

The power of life for accommodation to environments and changes, if not too sudden or too radical, is enormous, it is almost unlimited. This is one of the wise provisions of nature to insure a continuance of the race. Make a sudden change of temperature of the water in which a fish is living and it will die promptly. Produce this alteration slowly and it will live for a considerable time—it will gradually accustom itself to the unfavorable change and manifest no apparent bad effects. But, remembering the laws of nature, there must, to every action be an equal reaction, effects, then, must be and will be. As the action however is slow, the reaction will be equally slow, but it also will be equally certain.

What happens then to the human race, overworked, overfatigued physically and mentally, overloaded with katabolic products, for centuries and generations not hav-ing sufficient rest? The intermediary wastes, toxics, accumulate within the tis-They, like all mild poisons, irritate slowly, constantly and surely. As this continues, the body must either accommodate itself to the slowly acting poison by appropriate reactions or die. Those with low Those who resistance eventually expire. survive learn to react to the slow irritant. As a result, we have a constant increase of hardened, thickened, unelastic blood vessels, heart diseases, kidney diseases, lowered vitality, diverse environmental hypoplasias, and, above all, nervous disturbances of all kinds unmistakably growing with the steady increase of brain work and stress of modern life.

Institutions for various diseases are multiplying rapidly, so that in the near future we may expect to find this world an enormous asylum filled with deformed, sick, exhausted, nervous or insane individuals—irrespective of whether confined or at large.

VII

Plainly then, the conclusion is—that the world has not been getting sufficient rest for thousands of years; that, as a result, we have disease, either as distinct entities or general morbid tendencies, spread widely and increase constantly; that these have about reached the climax through the fact that the primitive form of rest is still persisting while the stress of life is steadily increasing in intensity; that the above must be remedied by increasing the amount and improving the conditions of rest—this can be best accomplished by wide educational campaign and consequent legislation; that it is the duty of the medical profession, as guardian of public health, in particular, and the scientific world in general, to commence to work on these measures at once so as to check the enormity of the aspect which the complicated problem has assumed already.

THE HIPPOCRATIC OATH.

I SWEAR by Apollo the physician and Esculapius, and Hygeia, and All-heal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this Oath and this stipulation—to reckon him who taught me this art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture and every other mode of instruction, I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and

mischievous. I will give no deadly medicine to anyone, if asked, nor suggest any such counsel; and in like manner I will not give to a woman any means to produce abortion. With purity and with holiness I will pass my life and practice my Into whatever houses I enter I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and further, from the seduction of females or males, of freemen and slaves. Whatever, in connection with my professional practice, or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. Whilst I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men, But should I trespass and in all times. violate this Oath, may the reverse be my

PUBLIC HEALTH AND THE PRESS: FROM THE HEALTH OFFICER'S STANDPOINT.

BY THE EDITOR OF THE GAZETTE.

An address delivered at a meeting of Health Officers.

THE average citizen gets all kinds of circulars with every mail-asking him to vote for Jones, to try Brown's tooth powder, to help support a maiden ladies' home for illtreated cats; all these he is likely to throw into the waste basket unread and unappreciated. But should he come upon the same matter in the columns of his morning newspaper, he will assimilate it with due interest and respect; and this is true also of weeklies, magazines and like literature. It is logical, therefore, that the journalist who is willing to disseminate public health information should prove an indispensable ally of the health officer in the maintenance of the communal health. To me is assigned the consideration of how this salutary alliance may be established and improved.

In the first place, everyone will upon reflection agree that the most important of all public work is the preservation of the public health; wherefore news concerning such work should be fully presented and well headlined in the press. Especially will the editor be anxious to have such news correct; and generally one finds it so in the newspapers. The average editor, in fact, gets all the statements in his columns as precise as is humanly possible, if for no other reason than that his esteemed contemporaries would make life infinitely dreary for him, if this were not so. I think that the information offered concerning the public health in most newspapers is safe and sane. In the large cities, I have no doubt. medical men are retained to vise such matter. to the end that it shall be without error. But I imagine all the seven hundred newspapers in this State cannot afford such Olympian luxury, so that from time to time some fairly heavy breaks on medical subjects appear. And I submit that one advantage in a cordial co-operation between the health officer and the newspaper man

would be the elimination of such error; the former could when asked, review the journalist's copy, correct any mistakes natural to the unprofessional mind; on the other hand, the health officer could oftentimes get printed matters of vital importance to the community.

In my experience such an alliance has been altogether wholesome. During my work as a coroner's physician I was nearly every day asked for information by newspaper men. I was always able to differentiate between matters the public should know, and the strictly private matters which inevitably came within my ken; and I never from first to last had any difficulty in making the journalist grasp the difference, and in getting him to make public only such information as was intended to be such. This was fifteen years ago; and pretty much the only agreeable recollection I have of that work is of my relations with newspaper men.

I would here counsel the medical health officer, in his alliance for the public weal with the newspaper man, either to prepare a rough draft of his observations, or to write a paper—something short and crisp, detailing the medical facts he wishes to impart; leaving to his newspaper confreré the business of transforming it into good newspaper copy. In such presentations the health officer should acquire the knack of translating medical terms into such as can be understood by the man on the street and the woman at the cooking stove—the sort of people for whom the information is intended.

This is a knack not usually to be acquired without some practice; which the health officer should be willing to undertake by reason of the large salaries that are assured them. No layman will know, for example, what is meant by acute anterior poliomyeli-

tis; but he will understand what infantile paralysis means. To write that someone died of asthenia de senectute would suggest to the layman that one of the newfangled diseases doctors are always inventing had done the business; it were better to write that it was just old age took off the victim.

.

11

L

And why should not the health officer prepare a weekly letter or article on public health conditions peculiar to his locality. This should make excellent and most interesting copy, which the editor would no doubt welcome cordially. There could certainly be no matter of more vital interest to the community. Here, as in all phases of the communal welfare the Health Department of our State stands ready to furnish whatever scientific material would be needed for incorporation in such articles.

And may I now address especially the newspaper man.

There is one aspect in which the health officer-journalist alliance would be of enormous public benefit; and that is, education regarding the general nature of in-There should be clear explanation that not all infections are uniformly deadly, nor all transmitted in one way, that whilst some infections are most serious, others are comparatively innocuous. public here sadly needs discriminative knowledge. There is a vast amount of occasionless, inhuman and indeed pitiable pathophobia or senseless fear of disease abroad; such as one sees from time to time in the savage attitude of people toward the consumptive, who is absolutely harmless, so long as his sputum is properly disposed of. Such ignoble pathophobia makes itself obvious in fanatic objection to dispensaries and hospitals for consumptives, which institutions are absolutely the community's best safeguard against this disease.

No editor indeed could be more beneficently engaged than in the dissemination of right information upon matters concerning the public health. Here, as in life generally, the things that are to be feared are those which are not comprehended; and here, as elsewhere in life, terror almost invariably disappears in the presence of knowledge. The citizen who is made to understand the dangers, the sources and the nature of such diseases as are inimical to the body politic, will come not to fear them, and then he will the more readily

do his part in the rational prophylaxis against them.

And such education is especially essential to the progress of public health work in our American communities, because, under our republican form of government no laws, sanitary or otherwise, can get themselves adequately enforced without the backing of public opinion. We have thus got to create a sound and rational public opinion, for the furtherance of our public health work; and to this end the local health officer and journalist, with the everready help of the State Department of Health, should earnestly address themselves. And such endeavor cannot but potently interest the citizen, immediately he comprehends that it has to do with matters intimately affecting his very life and that of his family, and the preservation of his home.

While on this phase of my subject, I venture to note that both the practicing physician and the health officer are in no slight degree hampered in their work, by reason that many journals (not nearly so many as formerly, however), print advertisements of manifestly misleading and baneful character; it is odd, indeed, that such advertisements have especially been favored by professedly religious journals, which should have the highest regard of all for the truth. Such advertisements have been particularly unfortunate and frequently of fatal effect upon the poor consumptive. A specimen of this kind has been "Kochine," a bogus concoction, in connection with which the name of the great father of preventive medicine was most perniciously exploited. Many remedies, alleged to be alcohol free (which the most of them certainly are not) are advertised as recommended by statesmen and clergymen. In view of the fact that alcoholism is a most potent predisposition to consumption, such advertisements as the following cannot be too strongly reprehended: Blank's Malt Whiskey. (An endòrsing clergyman's picture). coughs, colds, most forms of grippe, consumption, bronchitis, pneumonia, catarrhs, dyspepsia and all kinds of stomach troubles," etc.

Indeed, no greater benefit was ever done both the cause of the public health and sound journalism, than in Samuel Hopkins Adams' divulgence of The Great American Fraud, in which such wickedness is pilloried.

Finally, I want to quote from a paper

by Dr. L. L. Lumsden, of the United States and Public Health and Marine Hospital Service:

"In some instances the attempt may be made to conceal the facts about health conditions in a city for fear that if the conditions become known the business interests will be injured. It is just about as easy for a community to succeed in such concealment as it is for a man to conceal the fact that he has a broken leg, by making efforts to run. The tactics are bad and the results usually disastrous. It certainly seems more in accordance with sound business principles for a city to know its

health conditions, to improve them, and then to use the improved conditions as a basis for legitimate advertising."

It is thus evident that there can be no more beneficent outcome of an alliance between the health officer and the newspaper man, than the mutual pursuing of an absolutely honest course, whenever a grievous epidemic has unhappily come upon a community. Here no concealment should be countenanced, no matter what pressure may be brought to bear by the local boss or the vested interest; and here the press should hold up the health officer's hands in manner unmistakable by the most obtuse, or the most selfish unit in the body politic.

THE AUTOBIOGRAPHY OF AN OYSTER.

I AM born without jaws or teeth; but I've got fine muscles, liver and a heart. In each year of my life I produce 1,200,000 eggs; each of my children is 1-120th of an inch in length; so, 2,000,000 little ones can be crowded into a space of one cubic inch.

I am ready for the table in from one to five years after birth. You will never find me in cold parts of the world. I dislike cold. In Ceylon I sometimes grow to a foot in length. One of me there makes a stew, when I am half a foot broad. I am not of much account in England, unless I am imported there from America. It makes me very sad to think of fetching up in the Strand—I, who was discussed by Tiberius and Julius. I have been the cause of much bloodshed. Men fight fierce battles for me all along the American coast, the Italian, and the coasts of Kent and Essex.

If you eat me raw you are not at all likely to regret it, for I am in a raw state very nutritious and easily digested. As a fry I am inclined to be uninteresting and heavy. So few know how to fry me. I am about the only animate thing that can be eaten with impunity in a raw state. Parasites cannot exist in me as they can in chops and steaks and fruits. I am a pretty good friend to man. And to women. Look at the pearls I've given her. Thackeray has compared me in a raw state to a new baby. Yet I never kept him awake nights.

I'm not half bad in a stew; but as a roast in the shell all the poetry in me comes out. Then I sizzle with emotion, in butter, red pepper and a little sauce. The clam is like the driver of a hansom cab then—not in it with me. The clam! That commonplace fellow! I avoid him as much as possible. I am not a snob, nor yet a cad, but I really must not be expected to fraternize with the clam, nor can I discuss him. The line must be drawn. He's not in the Four Hundred. Well, I am.

Psychology, of which Dr. Hall is so illustrious an exponent, was unknown to the ancients and the mediævalists; but that they had some prescience of symptoms such as now are denoted as psychological is impossible of contradiction. Ovid portrayed admirably the psychism of a lover. Propertius, with wonderful perspicacity, defined "loving as a kind of fearing"; which is

precisely the condition of the modern Hibernian who is "all of a thrimble" when he goes to make love. Men are said to be nervous when about to propose; this is just a euphemism for being afraid—as they well might be in these circumstances. Petrarch said love made him freeze in summer and fry in winter—a sentiment in which all masculinity will bear him out.

RURAL SANITATION.

SEWAGE AND FERTILIZER.

One of the most important problems in modern sanitation has to do with the disposal of city waste. At the request of the sewage disposal commission of one of our largest American cities reports were prepared by our consuls to various European cities. Reports from London, Berlin and Paris were not asked for. The chief American civic problem is how to purify sewage before discharging it into rivers or other convenient bodies of water; and methods, both economic and efficient, of purification to meet the peculiar requirements of given cities were sought. The aid our consuls have given are here epitomized:

ENGLAND.

In Birmingham, England, the household wastes and street washings flow through the same sewers, with which latter more than half the houses in the city are connected. The sewerage is first run into settling tanks and then treated on biological filters. The sewage is treated biologically, rendered inodorous and afterward dried on drying beds.

In Bradford (population 288,000) household wastes and street washings are run into the same sewers; the sewage is purified by chemical precipitation and filtration. The sludge is filter-pressed for the extraction of wool grease, the yearly value of which approximates \$250,000. Part of the press cake is sold as manure to farmers at 74 cents a long ton (thus meeting some of the cost of purification), and part is used as fuel. The first method of sewage purification was filtration through peat. Later lime purification, followed by filtration through coke was tried; which method also failed. The street sweepings are tipped into vacant land; house garbage and ashes are part tipped and part burned.

Liverpool discharges nine-tenths of its sewage into the Mersey without any kind of treatment. The remainder is treated on the West Derby and Walton sewage farms, by broad irrigation without chemical treatment, but assisted by bacterial and storm-water beds. The West Derby farm has an area of 207 acres, and receives the sewage of 56,000 inhabitants; that of Walton has an area of 183 acres and receives the sewage of about 62,000 people. The crops on both farms consist chiefly of rye grass, cabbages, potatoes, mangel-wurzels and beets.

The Sheffield sewage, until 1886, flowed untreated into the surrounding rivers and water courses. A main sewage scheme was then completed, at a cost of \$750,000, and the construction of sewage disposal (lime precipitation) works brought the total up to nearly a million. It was designed to treat a daily flow of ten million gallons of sewage, but for several years seventeen millions have been dealt with, whilst the population since 1886 has increased from 304,720 to 470,000; and the introduction of the water-carriage system, the extension of the drainage area and the increased requirements have necessitated improved methods of treatment in addition to increased capacity. After exhaustive experiments a continuous-flow settling tanks and contact beds scheme was decided on; this is now partly in operation and cost \$1,350,000; in addition the city has bought lands for the present works and future extensions at a cost of \$430,000. The principal features of the scheme include a new main valve chamber into which a five foot barrel sewer discharges, and also a seven-foot duplicate sewer. A storm water overflow arranges to discharge the excess flow above 64,500,000 gallons per day to a stormwater conduit fixed in the chamber. large penstock, with openings five by twelve feet, admits the sewage to a conduit twelve feet wide, which conveys it to the catch pits. Two pairs of catch pits, 42 feet long, 29 feet wide and 13 feet deep, are fitted with new screens, which extend the whole length of the pits and are cleaned by hand rakes. The catch pits are in the form of a double hopper and retain the heavier grit, garbage and larger objects. Each pair is fitted with endless chain bucket elevators for cleansing purposes. Two additional catch pits, about twice the size of the older ones, have been added, and fitted with mechanical screens and an electrically driven travelling bucket dredge. The sewage passes from the catch basins through branch and main conduits 12, 16 and 20 feet wide, built in brick and covered with girders and concrete to the settling tanks. The complete scheme includes seventeen continuous-flow settling tanks, now in operation and each holding about one million gallons. Sixty contact beds, each of half an acre and sixteen storm beds of like design but twice the size are being constructed. The works will provide for the treatment of 64,000,000 gallons of sewage daily, and will be one of the largest of its kind. And Sheffield has two extensive garbage destructors, the refuse destroyed in 1912 and 1913 amounting to 42,898 and 33,805 tons respectively at a cost of \$28,760 and \$21,450. Dumping 35,663 tons of garbage by railway transportation cost in addition \$20,435. A plant for converting dirt refuse into fertilizer recovered 82 tons in 1913, and the municipality profited \$600 by its sale. There is also a can-bundling plant that handles 300 to 400 tons of used cans the year.

IRELAND.

Belfast employs the single-sewer system. At one time all sewers emptied into the Lagan; but sedimentation tanks are now used, and the purification effluent is stored in pond until high tide, when the discharge commences. The sewage is pumped into a ferro-concrete loading tank, whence it is discharged into a steamship and carried out to sea-the most economical plan, in the opinion of the city fathers, for a city situated by the seashore. A refuse destructor having twelve cells, each with a capacity of ten tons per 24 hours, has been constructed. An incinerator furnace has been added, wherein are consumed all infected articles. typhoid excretes, diseased carcasses, fish offal and other objectional material. objectionable matter is either used to fill up hollow ground or sold for manure.

SCOTLAND.

Glasgow uses the single-sewer system: the sewage is purified by chemical precipitation; a portion is filtered. A portion of the sludge is filter-pressed; the bulk of it is sent to sea. Part of the street sweepings, garbage and ashes is "destructed"; part is sold

GERMANY.

Bremen (172,000 population) depends chiefly on the Tremmuy (divided) sewerage system in which the sewer has two parts: the upper and larger for street washings; the lower for household wastes. The street washings are emptied directly into the river; the sewage is mechanically cleaned. An experimental plant for further purification has recently been put in operation. sweepings are dumped. Garbage and ashes are burned in the municipal garbage-burning plant. The present garbage-burning plant was constructed in 1907, and has been satisfactory in every respect. Not only is the city's garbage disposed of in a sanitary manner, but incidentally a fine quality of sand is produced, and the heat evolved from the burning garbage is converted into electricity. The slag is reduced by crushing to various grades of sand that have made excellent brick and other building material.

Düsseldorf (population 400,000) carries off her household wastes and street washings in the same sewers. The sewage is purified in a Fein-Rechenaulage (fine raking plant) and the sludge is sold to farmers. Street sweepings, garbage and ashes are now carted; but a plant for burning such refuse is contemplated, and it is planned to use the waste of this plant in making artificial stone, fertilizer and so on.

Brunswick disposes of her household wastes and street washings in the same sewers, and the sewage is treated on a sewage farm (Rieselfeld), about four miles from the city, costing \$644,504 and comprising 1,150 acres; 579 acres of this farm are laid out in beds for raising vegetables and 308 are used for raising grass. The results are said to be better than for any other German city, especially Berlin; and the success is attributed to the fact that the water is drained off by underground pipes. Berlin has shown that underground drainage is absolutely necessary; otherwise the soil becomes matted and foul. The Brunswick farm vegetables are of remarkable size, the

cabbage heads especially, but the quality is inferior; and when cooked the vegetables reveal by odor and taste the excremental nature of the fertilizer. Consequently they are

consumed only by the poor.

Hamburg (population 1,000,000) is on the Elbe, where the tidal ebb and flow amounts to 6.56 feet and where conditions are such that the current of the river itself is disregarded as an influence in the matter of sewage disposal. Household wastes and street washings flow into the same sewers. The contents of the main sewer, before being discharged into the Elbe, pass through collecting basins in which swinging dredges continually remove solid and floating material, which barges then transfer to a lowlying island in the river, the level of which is being slowly raised. The waste water then flows into the river through their final discharging pipes. The tides occasion a steady circulation of fresh water and a continual churning of the refuse, which facilitate its destruction. No general attempt is made to sterilize sewage at Hamburg. Garbage and ashes are cart-collected and incinerated.

FRANCE.

Rheims (115,000 population) has her kitchen sinks in the modern buildings connected with the sewers, and in about two hundred buildings the water-closets are also connected. A private company does the work. Before 1885 chemical purification was attempted, but with failure. The street sweepings, garbage and ashes are removed by private contractors to whom the city pays some \$15,000 annually. After sorting, this refuse is sold for fertilizer. The authorities may change this method of utiliz-

ing the street sweepings.

The Commune of Villeurbanne, near Lyons, burns its refuse and makes bricks of the residue. This has been a private enterprise, but the municipality has arranged to purchase the crematory, which is a model plant, and has annexed to it a brick pressing plant. The furnaces serves not only to burn the refuse but also to operate by steam the various machines in the factory. residue from the furnace is first carried through a series of heavy rollers, after which it is delivered in the form of a fine powder in a mixing trough. Here it is mechanically mixed with a heavy lime (80 per cent. of residue to 20 per cent. lime). This mixture is emptied into another, larger trough by a system of buckets operated on a chain, where the proper amount of water is added, and the material is then fed to a brick pressing machine of English manufacture, capable of turning out 20,000 bricks the day. After a month the drying is complete but the bricks are not as a rule used for sixty days from the time of leaving the press. The only kind of refuse not used in the manufacture are empty cans, metal barrel hoops and like waste that may easily be sold as scrap metal.

AUSTRIA.

Prague (population 575,000) conducts its sewage through four large sewers to a cleaning plant in a suburb. The sewage is first passed through a system of screens, which catch the coarser materials; the balance then passes along and is distributed in ten basins (285x18x9 feet) where the solid substance settles to the bottom-about 163 cubic yards of it each day. The thinner sediment is conducted onto an island, where it flows into trenches, the sediment from which, during the winter months, is taken in closed tanks on open boats to a point down the River Moldan, where it is again placed in open trenches to evaporate and then to be sold as fertilizer. After removing all the solid substances the water remaining runs into the river. Kitchen sinks and water-closets are connected with the sewers, into which flow also the street washings. Practically the whole city has sewers for household waste; nor has there been any other method of treatment; Street sweepings, garbage and ashes are hauled to depositories in the suburbs and sold to farmers.

Russia.

Moscow (population 1,580,000) is about forty per cent. provided with sewers for household waste. A separate system of canalization carries off the street washings. The sewage is filtered on sewage fields and part of it is subjected to biological treatment on the city station. The sewage fields are giving very good results. The waters, after passing several filters, are used to irrigate plantations of cabbage and other vegetables, which find a ready sale in the city. Moscow is still experimenting with the biological purification of the sewage.

Odessa (population 520,000) uses its sewage largely on irrigation fields, where it gives excellent results. Good crops of vegetables and fair crops of wheat are obtained. The street sweepings, garbage and ashes are dumped outside the city, although

a small portion is "destructed.'

DAN'S WIFE.

Up in early morning light,
Sweeping, dusting, "setting right,"
Oiling all the household springs,
Sewing buttons, tying strings,
Telling Bridget what to do,
Mending rips in Johnny's shoe,
Running up and down the stair,
Tying baby in her chair,
Cutting meat and spreading bread,
Dishing out so much per head,
Eating as she can by chance,
Giving husband kindly glance;
Toiling, working, busy life—
Smart woman,
Dan's wife.

Dan comes home at fall of night,
Home so cheerful, neat, and bright;
Children meet him at the door,
Pull him in and look him o'er;
Wife asks how the work has gone.
"Busy times with us at home!"
Supper done, Dan reads with ease—
Happy Dan, but one to please!
Children must be put to bed—
All the little prayers are said;
Little shoes are placed in rows,
Bedclothes tucked o'er little toes;
Busy, noisy, wearing life—
Tired woman,
Dan's wife.

Dan reads on and falls asleep—See the woman softly creep;
Baby rests at last, poor dear,
Not a word her heart to cheer;
Mending-basket full to top,
Stockings, shirt, and little frock;
Tired eyes and weary brain,
Side with darting, ugly pain;
"Never mind, 't will pass away,"
She must work, but never play;
Closed piano, unused books,
Done the walks to easy nooks,
Brightness faded out of life—
Saddened woman,
Dan's wife.

Upstairs, tossing to and fro, Fever holds the woman low;

Children wander free to play
When and where they will to-day;
Bridget loiters—dinner's cold,
Dan looks anxious, cross, and old;
Household screws are out of place,
Lacking one dear, patient face;
Steady hands, so weak but true,
Hands that knew just what to do,
Never knowing rest or play,
Folded now—and laid away;
Work of six in one short life—
Shattered woman,
Dan's wife.

Mrs. Kate Tannett Woods in Brain

Mrs. Kate Tannatt Woods in Brain and Brawn.

PERHAPS!

When cows fall ill the government proceeds to take alarm

And sends a veterinarian to sanitate the farm.

The cow herself is put to bed and plied with drugs and pills,

And Uncle Sam comes forward, when she's cured, to pay the bills.

But when a baby falls in need of medicine and care

The government contends that that is none of its affair.

When pigs and lambs are threatened by a deadly pestilence

Their tender lives are guarded at the government's expense.

They're coddled, nursed and dieted until they're well and fat,

And never reckon of the cost—for Unck Sam pays that.

But when an epidemic marks the babies for its own,

The government, untroubled, lets them fight it out alone.

Some day, perhaps, when all the pork has lavishly been passed,

When every scrap of patronage is handed out at last,

When all our noble congressmen have got all they desire,

And have attained whatever heights to which they may aspire—

To unknown heights of common sense the government will leap,

And do as much for mothers as it does for cows and sheep.

-Chicago Examiner.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

Leisure Hour was founded in the belief that the physician is but human; that he loves the beautiful in thought and sentiment as expressed in literature, and that he is at times surfeited with technical matter. Short, crisp contributions on any of the subjects named in the sub-heading are invited to this department.

DREAMERS AND DREAMLAND.

BY CHARLES W. SUPER, Ph.D. Athens, Ohio.

Dreams, dreamers, and the realm of dreams have attracted the attention of men almost from the dawn of history. But it is only within the last two or three score of years that the subject has been dealt with by physicians and scientists who have tried to formulate a law or laws according to which dreaming takes place. One of the latest, perhaps the latest work on the subject, is The World of Dreams by that indefatigable writer of books, Havelock Ellis. One needs but to glance at the list of authors, articles, and volumes cited by him to be convinced that for the last few years there has been a great deal of activity in the study of this class of psychic phenomena. According to Ellis, Maine de Biran, about a century ago, was the first to give the subject serious attention and Maury in his Le Sommeil at les Rêves inaugurated the method of investigation now current. Many years ago I had in my hands a small volume by McNish entitled Sleep and Dreams which I think must have been published in the forties or earlier. Whether it has any scientific value I am unable to tell as it is not at present within my reach.

Probably the earliest record of elaborate and significant dreams is found in the Book of Genesis. They are referred to, along with visions, scores of times in the Bible. As, however, we have no means of determining the age of the earliest of these documents they are interesting only as evidence of the importance attached to them and the belief that a supernatural power was wont to manifest itself in this way through its chosen instruments. In the Homeric poems

we find dreams regarded from exactly the same point of view. There is no difference between monotheists and poly-They were sent by some god either for the purpose of communicating their wishes to mortals or with the object of foretelling some future event. In the second Book of the Iliad Zeus is troubled in mind about the affairs of the two armies on the plain of Troy, and is trying to devise some means of compassing the death of as many Greeks as possible. So he addresses Baleful Dream and sends him with a false promise to the commander of the host to urge him to make an on-When Dream slaught upon the enemy. comes to the tent of Agamemnon he finds him sleeping and chides him for his failure to measure up to his responsibility. In the Odyssev when the hero arrives in the nether world and finds his mother, he says to her: "Mother mine, wherefore dost thou not abide me who am eager to clasp thee, that even in Hades we twain may cast our arms each about the other and have our fill of chill lament." His mother answers: "On this wise it is with mortals when they die. For the sinews no more bind together the flesh and the bones, but the great force of the fire abolishes these so soon as the lifehath left the white bones, and the spirit like a dream flies forth and hovers near." At another place in the same poem, we find the case put a little differently. "And even as bats flit gibbering in the secret place of a wondrous cave, when one has fallen down. out of the rock from the cluster, and theycling to each up aloft, even so the souls:

gibbered as they fared forth together, and Hermes the helper, led them down the dark ways. Past the stream of Oceanus and the White Rock, past the gates of the sun they sped and the land of dreams, and soon they came to the mead of Asphodel, where dwell the souls, the phantoms of men outworn." Elsewhere Penelope relates how in a dream an eagle came from the mountain and slew all her favorite geese, but afterward assured her in a human voice: "This is not a dream, but a true vision that shall be accomplished for thee." She continues: "Verily, dreams are hard and hard to be discerned; nor are all things therein fulfilled for men. Twain are the gates of shadowy dreams, the one is fashioned of horn and one of ivory. Such dreams as pass through the portals of sawn ivory are deceitful, and bear tidings that are unful-But the dreams that come forth through the gates of polished horn bring a true issue, whosoever of mortals beholds them." Probably the poet had a fairly distinct idea of what his lines mean, but certainly no one else.

There is one important fact to be kept in mind when we are studying the dreams. of the ancients as they are reported to us. It is often said that Socrates was the first man in the world to ask himself, Who am Whence do I come? What are my duties? This is perhaps too strong a statement; but there is no doubt that the ancients envisaged their thoughts as external entities, as the voice of some external being. They had no conception of the ego; at any rate there is very little evidence to that effect. In this regard they were in the same case with children who often call themselves by their own name instead of saying "I." Even Socrates had not quite reached the status of the modern scientist. He often mistook what we call conscience for a divine voice. In his last hours a voice called to him in a dream and laid upon him an obligation. He did not at all times distinguish among his mental processes much as he was given to discussion. The appearance of self-consciousness as it first comes to the surface in the history of the human race is an interesting study. That Socrates had a conscience without being aware of it is the only rational explanation of his daemon about which so much has been written in the history of Greek thought. Freud's theory that all dreams fall into the group of wish-dreams does not hold good in my case in the least

degree. Equally fantastic, it seems to me, and equally baseless is his correlative dictum that we only dream of things worth while. Nor are my dreams even remotely connected with my wakeful mental activities. During most of my life I have been a diligent reader of ancient history. Yet I can not recall that I ever met any of the worthier of the olden time although some of them such as Plato, and Aristotle are in my thoughts a great deal. Hardly a day has passed in the last forty years in which I have not read some pages of a language other than English. Often when not reading I write or think in German, Latin or French. But I do not recall that any one has ever spoken to me in a dream in any other tongue than my vernacular. am here testifying only of what I know at first hand I am constrained to confess that all my efforts to explain even one of my dreams in a hundred have been futile. My waking states and mental activities have hardly an appreciable influence upon them. Dreamland is for me a domain in which I have not been able to find an intelligent guide, or in fact any guide at all. I almost always wonder aimlessly amid scenes that have only a faint resemblance to those of my waking life, or none at all. The few persons I have seen from time to time have been ordinary mortals and not fantastic creatures, but I do not often recognize anybody. Most landscapes are earthly, but they too are almost always strange, at least far oftener than familiar. Ellis reports that aviation is a common mode of locomotion in dreams. This was my experience for a number of years, but I do not think it has been repeated during the last decade. When I flew I simply used my arms and hands as wings, and soon became weary. When I had occasion to fly across a valley or body of water I always wondered whether I could accomplish the feat. When deliberating the matter and the result seemed doubtful I usually woke up. As my habits of life have not been changed I can not account for this cessation. My experience has been similar with clothes. Often when I found myself in a room full of people I would suddenly notice that I had no shoes on my feet, or that my suspenders were unbuttoned, or that I had no pantaloons, or no coat on, or that some other part of my garb was missing, or out of place. As no one else seemed to notice my embarrassment I usually tried to slip quietly into a

corner or to one side in order to adjust matters but always failed. In my embarrassment I usually woke up. One might suppose that the contact of the bed-clothes with the body would produce dreams in some way connected with the clothing one is wont to wear during his waking hours. Albeit, this explanation will not hold unless such dreams are very frequent with the same person and common among men in general. In my case the personal equation counts for little as I am not fastidious in matters of dress, in fact am rather indifferent about my wearing apparel. In my dreams I have rarely had any pleasurable sensations; almost always quite the reverse. When I was flying I felt a sort of elation at possessing such a mysterious power, but it was in a large measure counterbalanced by the reflection that I was constantly liable to fall. I have often dreamed that I was shot. When the bullet struck me I awoke. When I dreamed that I was falling I woke up when I alighted. I have also dreamed a number of times that I was on the summit of a high hill of which the sides were so steep that it was dangerous for me to descend. Ellis has reached

the conclusion, from a summing up of such evidence as he has collected that "if we pierce below the surface we seem to reach a fundamental psychic stage in which the dreamer, the madman, the child and the savage alike have their starting point, and possess a degree of community from which the waking, civilized, sane adult of to-day is shut out, so that he can only comprehend it by an intellectual effort. It thus happens that the ways of thinking and feeling of the child and the savage and the lunatic each furnish a road by which we may reach a psychic world which is essentially that of the dreamer." Perhaps the most marked characteristic of dream-life is its resemblance to delirium. Hughlings Jackson has even gone so far as to say that if you "find out all about dreams and you will have found out all about insanity." While this statement may be somewhat strong there is little doubt that dreams and many states of disordered minds have a great deal in common. It is, however, extremely probable that all efforts to reduce this world of chaos into even a semblance of order will forever remain futile.

A PEACE HYMN.

By RABBI H. PEREIRA MENDES, New York.

FATHER enthroned on high!
Humbly Thy children cry
Send peace on earth!
May peace, prosperity
Fill earth from sea to sea,
May mankind bend the knee
In fear of Thee!

May earth no more rehearse War's song of crime and curse, O make war cease! Death-tube and shrieking shell Sound for brave men the knell, Widows the chorus swell—
"God! Send us peace!"

May mankind's psalm of life
Be peace instead of strife,
Filling all earth!
Look down from Heav'n and bless
Earth with Thy righteousness,
Then reign of happiness
Shall have its birth!

To the recipe for long life which Dr. Eliot contributes on his eightieth birth-day—day to be marked with a red stone—might be added the adoption of a secure and not too arduous path through life. Moderate eating, seven hours sleep, regular exercise and enjoyment without excess are excellent aids to long living; but

work which does not make too strenuous demands in the present and the absence of anxieties for the dim future take at least equal rank. The worry of to-day and the care for to-morrow are daily companions that wrinkle the brow and harden the arteries of the ordinary man of 1914 whose path does not lead through the "cool, sequestered vale of life."

TRAVELOGUES.

THE value of life deepens incalculably with the privileges of travel.—N. P. Willis.

Travel gives a character of experience to our knowledge and brings the figures upon the tablet of memory into strong relief.—

Tuckerman.

Much I long to view the capital cities of the world. The mountains, the great cities and the sea are each era in the life of youth.

—Bailey.

The use of travel is to regulate imagination by reality and instead of thinking how things may be, to see them as they are.—
Dr. Johnston.

Travel draws the grossness off the understanding and renders active the industrious spirits.—Beaumont and Fletcher.

Travel teaches toleration.—Disraeli.

According as each of them returned from distant parts they had marvelous tales to tell.—Travelers' Tales.

Peregrination charms our senses with such unspeakable variety that some count him unhappy who has not traveled.—Burton.

Ancient travelers guessed. Modern travelers measure.—Dr. Johnston.

Travel, in the younger sort, is a part of education; in the elder a part of experience.—Bacon.

Voyage, travel and change of place imparts vigor.—Seneca.

To see the world is to judge the judges.

—Joubert.

Travel is fatal to prejudice.—Mark Twain.

Travel makes all men countrymen, makes people noblemen and kings. And every man tasting of liberty and dominion.

—Alcott.

When any one goes on his travels he has something to recount.—Clondias.

Travel is to learn character.—Pordo.

He who never leaves his own country is full of prejudices.—Carlo Goldoni.

Though sluggards deem it but foolish chase, And marvel men should quit their easy chair.

The toilsome way, and long, long leagues to trace.

Oh, there is sweetness in mountain air,
And life, that bloated ease can never hope
to share.

—Byron.

Travel—the useful science of the world to know.

Which books can never teach nor pedants show. —Lord Lyttleton.

Rather see the wonders of the world abroad, Than, living dully sluggardized at home, Wear out thy youth with shapeless idleness.

—Shakespeare.

Let him spend his time no more at home, Which would be great impeachment of his Age.

In having known no travel in his youth.
—Shakespeare.

Nothing tends so much to enlarge the mind as traveling.—Dr. Watts.

The bee, though it finds every rose has a thorn,

Comes back loaded with honey from his rambles,

And why should not other tourists do the same.

—Haliburton.

For me the upland road, The gypsy wayfaring, And for a goad The buoyancy of Spring!

There shall be cowslip lures
In hollows dim and deep;
Over the moors
The great hill-winds shall sweep.

The feathery fern, the cress, Balsams that attars shed, All these shall bless The climbing path I tread.

So, till the night's white stars

Burn in their blue abode,

Bound by no bars,

For me the upland road!

—CLINTON SCOLLARD.

LEST WE FORGET.

THEY are now fighting the greatest war in history. Pari passu, what is probably the greatest peace achievement since the dawn of civilization, The Panama Canal, will presently be ready for the world's commerce. It were advertent to consider how and only how this latter epic work was made possible of achievement.

It was one of the finest inspirations of Keats—surprised Balboa viewing the Pacific from a peak of Darien. And that prescient explorer is said to have conceived what has now been accomplished. Even in Balboa's lifetime was the Isthmus Spain's commercial gateway; through which passed most of the gold and silver Pizarro's men got from the Incas; pearls from the Islands; gold from the Central American and Mexican coasts. Balboa's father-in-law, d'Avila, founded Panama, which was some miles from the site of the present city: and this stronghold rivalled the mother country in Extraordinary opulence its splendors. there was; and the life was of almost Asiatic luxury.

Panama was indeed too rich a prize for Morgan and his buccaneers to disregard; and they did for d'Avila's city in 1671. Then began the gruesome era which was ended only by our American sanitary authorities; the era Robert Louis and James Payn revelled in; when Yellow Jack was the undertaker and Davy Jones' locker the grave yard: when

"Ten men sat on a dead man's chest, Ho, ho, ho and a bottle of rum."

Old Morgan's job was so thoroughly done that the site of Panama was, until deLesseps, overgrown by a dense and most pestilent tropical forest. Humboldt visited the Isthmus about 1800 and considered it must always be cursed by pestilence, which he understood to be caused by the decaying molluscs and marine plants on the beach at low tide, and by foul emanations (malaria) from over rank vegetation.

Why has Panama, among tropical regions, been since Balboa so peculiarly pestilent? Because the Isthmus has been the commercial point of crossing the Western Hemisphere; wherefore there have always come to it innumerable unacclimated European and other venturers, easy victims to the tropical infections.

It took deLesseps from 1881 to 1892 to

develop his grandiose failure and there is space here only to quote Froude, who visited the Isthmus in 1885:

"In all the world there is not perhaps now concentrated in a single spot so much swindling and villainy, so much foul disease, such a hideous dung heap of moral and physical abomination, as in the scene of this far-famed undertaking of nineteenth century engineering. The scene of operations is a damp, tropical jungle, intensely hot, wet, feverish, swarming with mosquitoes, snakes, alligators, scorpions, and centipedes, the home, even as nature made it, of yellow fever, typhus, and dysentery; and now made immeasurably more deadly by the multitude of people who crowd thither." (Froude could certainly "sling" the English language.) After all apart from the dreadful peculation attendant on the French occupation, those brave men, so contemptuous of death, did perhaps as well as could have been done, considering that the discoveries of the transmission of those tropical infections had not yet been made. Their success was an absolute impossibility by reason of the disease conditions they had to contend with.

We Americans, however, came to the Isthmus in the full knowledge of those discoveries, in which Finlay, Reed, Lazear, Carroll, Agramonte and others played so illustrious a part. Came now Gorgas, to whom Colonel Magoon, the then military governor of the Zone, assured all the Government's resources in that region. With what result? The now Surgeon-General of our Army, and his associates, brought down the mortality in that erstwhile deadliest region on the footstool to a rate that is the despair of many American commu-In 1907, for example, Gorgas had in the Canal Zone a death rate lower than that of the City of New York, which is about the lowest, rural or urban, in civilization. And he has been saving life at the cost of \$2.43 the individual; whilst his scheme of sanitation has cost just five per cent. of the total canal building expenditures.

Certain it is that vessels could not now be passing through the Canal had not devoted and zealous men, from Finlay to Gorgas, so magnificently and with so much altruism, suffering and martyrdom, led up to and applied the discoveries of medical science to the epic enterprise.

AMBIDEXTERITY.

THERE is said to be in England a society devoted to the use of the left hand equally with the right. Germany has also a movement for the cultivation of ambidexterity, an advocate to this end considering that whilst right handed people have the language centre in Broca's convolution which is in the left brain, those who are ambidextrous have two language centres, one for each hemisphere. The infant begins its life with two speech centres; but as the right hand is gradually trained and the left neglected, one speech centre becomes rudimen-It is argued that by cultivation of the left hand the capacity of the right speech centre can be revived (so that people can talk twice as well-a consummation devoutly to be reprehended); and that intelligence can be broadened as ambidexterity increases the utility of a human being's

Mr. J. Liberty Tadd, a writer on education, and an educator whose work is known on both sides of the Atlantic, would begin to make children either handed with the first kindergarten classes. The system of training which he advocates is said to be already comparatively common in England, France and Germany; it does not seem to have made as much progress in the United States, although it is being taught in nine schools in Philadelphia.

Nevertheless, Sir James Crichton Browne's belief that ambidexterity on the large scale is impossible and undesirable, is impressive: "It is by the superior skill of his right hand that man has gotten himself the victory," and to try to undo his dextral pre-eminence is just to fly in the

face of evolution.

The brute creation is ambidextrous. All four feet being used for locomotion, there is no lateral differentiation of function. A cat plays with a mouse or strikes at an insect indifferently with either paw; a squirrel holds a nut impartially with both front Even simians, which of all animals use the fore paws mostly as hands, there is ambidexterity, with no suggestion of preferential use of one or the other paw. In microcephalic idiots, when small headedness is due to arrested development, an ambidexterity has been found to reach a proportion as high as fifty per cent.

But as to the normal genus homo: our Bronze Age and Palæolithic Age ancestors were right handed. The earliest human beings of whom history or geology gives any evidence were right handed—a fact demonstrated in the art of Assyria, Egypt and Greece. All nations, tribes, peoples, have ever preferentially used not only one, but the same hand; nor can to-day any race be pointed out which is either handed or ambidextrous. (It has been averred that the Japanese are by law and practice ambidextrous; but Baron Komura is the authority that such a statement is without foundation.)

There is after all no voluntary selection in the matter, because righthandedness is established in anatomical configurationin the structure and organization of the brain, which initiates, directs and controls purposive movements. The left brain presides over the right side of the body, and vice versa; and functional differences in the two hands are contingent in the two hemispheres, differences perhaps of weight, perhaps of blood supply, but assuredly of

convolutional development.

Damage to Broca's convolution (by traumatism or disease) deprives the right handed man of speech, but leaves the left handed man with speech unimpaired; in the left handed man the contrary holds good. Moreover the hand and arm cerebral centres are intimately linked with the speech centres, and the logical inference would seem to be that the preferential use of the right arm and hand in involuntary movements are also due to the leading part taken by the left hemisphere.

We cannot get rid of right handedness; it has been woven in the brain, and to change the pattern the tissue must be unraveled. Ambidextral culture, enough in some few especially employed people must on a large scale tend to confusion; the attempt to make it universal "must involve the enlargement of already overgrown lunatic asylums."

Dr. George M. Gould, moreover, points out that righthandedness is fixed—and has so been from Xenophon to West Pointin all our military customs. From time immemorial the sinistral (the cardiac side) was protected by the shield in the shield hand, the left; whilst the dextral was the spear hand and has since become the sword or the gun hand. And righthandedness is as fixed in inevitable human custom: The fundamental condition of bartering was

¹ Righthandedness and Lefthandedness.-Lippincott's.

counting with the low numbers, one to ten; the fingers of the free, the dextral hand were of course first used, and all fingers are to-day called digits, as are the fingers themselves; and the basis of our numbering is the decimal of ten fingered system. The tally stick, notched or numbered, is the record of the digits held in the air.

But four per cent. of human kind are left handed; how have they become so? In primitive times potentates were rather fond of lopping off the right hand, or having the right eye gouged out of such of their subjects as happened to offend them. Dr. Gould considers this may account for the preservation of the present four per cent. of left handedness in the world.

Of course there are occupations in which a certain amount of ambidexterity is essential. For example, the pianist, in playing the fugues of Bach and of the old masters

left hand almost the same notes as with the right; and he has, moreover, to work a little harder (and just as rapidly) with his left, because the bass notes of the piano are more heavily wired than the treble. The surgeon must also, to some extentbut not much be ambidextrous; nevertheless even here are drawbacks as when a colleague thus skilled admitted he lost appreciable time wondering which hand he would use in a given manoeuvre.

In the profession of pugilism either handedness is also desirable (so it is stated).

It is claimed in favor of education in ambidexterity, that if a clerk (for example) should lose his right hand he would be thus handicapped in earning his livelihood; but in such very rare cases of righthanded mutilation education and practice will soon develop adequately the right brain centres, in music, must oftentimes produce with the with lefthandedness naturally following.

A PRAYER OF THE PEOPLES.

By PERCY MACKAYE.

God of us, who kill our kind! Master of this blood-tracked Mind Which from wolf and Caliban Staggers toward the star of Man— Now, on Thy cathedral stair, God, we cry to Thee in prayer!

Where our stifled anguish bleeds Strangling through Thine organ reeds, Where our voiceless songs suspire From the corpses in Thy choir-Through Thy charred and shattered nave, God, we cry on Thee to save!

Save us from our tribal gods! From the racial powers, whose rods— Wreathed with stinging serpents—stir Odin and old Jupiter From their ancient hells of hate To invade Thy dawning state.

Save us from their curse of kings! Free our souls' imaginings From the feudal dreams of war; Yea, God, let us nevermore Make, with slaves' idolatry, Kaiser, czar, or king of Thee!

We who, craven in our prayer, Would lay off on Thee our care-Lay instead on us Thy load; On our minds Thy spirit's goad, On our laggard wills Thy whips And Thy passion on our lips!

Fill us with the reasoned faith That the prophet lies, who saith All this web of destiny, Torn and tangled, cannot be Newly wove and redesigned By the Godward human mind.

Teach us, so, no more to call Guidance supernatural To our help, but—heart and will— Know ourselves responsible For our world of wasted good And our blinded brotherhood.

Lord, our God! to whom, from clay, Blood and mire, Thy peoples pray— Not from Thy cathedral's stair Thou hearest:—Thou criest through our

For our prayer is but the gate: We, who pray, ourselves are fate.

BOOKS

THE CANCER PROBLEM.

Each successive generation has added its quota of theory to the subject of Cancer, with now and then a fact to illuminate the situation, while the inauguration of what has been called the era of modern or scientific cancer research has produced books, brochures, papers, and other contributions in disconcerting volume. It has been correspondingly difficult for those not actually taking part in the campaign of research, and even for those who are the real history makers in this line, to keep abreast of the times and to satisfactorily digest the mass of cancer literature.

In the Preface to "The Cancer Problem," (The Macmillan Company, New York and London), the author, Dr. William Seaman Bainbridge of New York, says: "With the development of the widespread interest in cancer there has arisen a definite need for a book of ready reference, of convenient size, giving in succinct and available form a summary of knowledge concerning the subject. This is needed by the general practitioner, by the specialist, by the intelligent layman, by the lecturer on health matters; in fact, by all who are definitely interested in questions of health maintenance."

Dr. Bainbridge has succeeded in his undertaking remarkably well. Finding it necessary, as he states, "to touch upon practically every phase of the cancer problem, to state theories, to emphasize facts, to review the work and opinions of those who are qualified to speak with authority, and to maintain throughout an attitude of 'suspended judgment pending proof,' he has shown skilful discrimination in winnowing the wheat from the chaff, the fact from the fiction.

The fourteen sections, some of which are subdivided into chapters, the final survey called "The Outlook," the General Bibliography, the Index of Authors, and the very full Index of Subjects, all contain a surprising amount of valuable information concerning this mutiplex question.

Practically every class of reader can find within the pages of this book subject matter to suit his particular needs.

The Statistician will find the Section on "Statistical Considerations" a book within itself, full of valuable information and a careful correlation of facts and figures, instead of the usual compilation which one is accustomed to encounter under the heading. Careful study of this section will dispel much of the alarm created by those who for so long have harped upon the one string of the increase of cancer. It is to be hoped that American statisticians will be stimulated to remove the stigma which some of our foreign confreres have placed upon our methods of collecting data, so that, in future editions of "The Cancer Problem," the author will not be forced to accept the imputations made abroad.

The laboratory worker will find the Section under "Histo-Pathology" a condensation of knowledge concerning the minute anatomy and pathology of cancer that must prove of great practical value, particularly as it is supplemented with a large number of histological plates and other illustrations. This section, together with that part of Section I, which deals with the "History of Modern Cancer Research", and Section entitled "Cancer Research—A Resume of the World's Work", will give much valuable data to those who are especially interested in the laboratory and purely experimental phases of the subject.

Just at this time, when not only medical societies, but women's clubs, mothers' congresses, and very nearly every other variety of organization, are dabbling in cancer study, the section on the "Campaign of Education" will be found peculiarly pertinent. It is interesting to note that Dr. Bainbridge takes a very conservative stand on this particular question of educating the public with reference to cancer. In addition, the sections on "Prophylaxis," "Institutions for the Care of Cancer Patients," and "The Inves-

BOOKS. 559

tigation of Cancer Cures," will give to propagandists much conservative, rational, and logical matter which, if properly digested, will augur well for the victim of cancer and for those who, by virtue of age, sex, industrial, or other predisposition, are fair subjects for the inroads of this disease.

The clinician, however, is always interested in the vital question, "What Can I Do for My Patients?" Abundant answer to this question is found in the sections on "Clinical Course and Diagnosis (including a valuable subdivision on "Possible Errors in Diagnosis"); "Non-Surgical Treatment"; "Surgical Treatment (comprising the subdivisions, "General Technic of Surgery as

Applied to Cancer," and "Special Technic"); and a practical consideration of "Irremovable Cancer."

After reading Dr. Bainbridge's clear-cut exposition of the entire subject, the reader will be in accord, we think, with the closing paragraph of the book: "While it cannot be gainsaid that the cancer problem to-day is still fraught with perplexity and uncertainty, one indisputable fact stands out in bold relief, serving as both guide-post and danger-signal for the present and future—if cancer be cut out soon enough a permanent cure is effected! This alone is sufficient to warrant the statement that we are 'travelling hopefully'."

PRESERVATIVES FOR FOOD. By Otto Folin, Ph.D. Hamilton Kuhn, Professor of Biological Chemistry in Harvard University, Cambridge. Harvard University Press, 1914. This excellent little book (price fifty cents) is one of the Harvard Health Talks, the others thus far issued being Care of Children, Care of the Skin, Care of the Sick Room, Care of the Teeth. In considering the problem of the use of chemicals in foods Professor Folin considers that We need preserved foods, now more than ever, and there is therefore a legitimate and highly important field for the application of suitable chemicals, (if such preservatives can be found), to foods which would otherwise be wasted. 2. Benzoic acid and sodic benzoate are the most promising of the modern chemical preservatives, though we are not yet justified in saying that they are strictly harmless. 3. Competent and disinterested experimentation with different chemical preservatives is much needed, and should be encouraged. 4. It is not clear that the use of even a somewhat harmful preservative might not as the whole be desirable in the case of certain products, which, without the use of a preservative, would be eaten in various stages of decay. 5. The use of chemicals in foods for coloring purposes is essentially barbarian, and both this and all unnecessary additions of chemicals to foods for purely commercial ends might with advantage be altogether forbidden.

FOOD PRODUCTS, Henry C. Sherman, Ph.D., Professor of Food Chemistry, Columbia University, N. Y. The Macmillan Co., 1914. \$2.25. Professor Sherman most admirably assembles, in addition to his own authoritative outgivings, the recent advances in his subject which have been too widely scattered in the literature to be readily accessible. chapter is devoted to each important type of food. One finds for each article of food an account of production and preparation for market; its proximate composition and general food value; its special characteristics of composition, digestibility, nutritive value and place in the diet. The work is most heartily recommended.

CHEMISTRY AND TOXICOLOGY FOR NURSES. By Philip Asher, Ph.G., M.D., Dean and Professor of Chemistry at the New Orleans College of Pharmacy. 12mo of 190 pages. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$1.25 net.

This is a brief, concise and adequate presentation of those features of the science of chemistry which are intimately related to the needs of medical and nursing professions. The difficulties of this science are made plain. Under the headings of those substances used in medicine, their medicinal properties, doses and uses are given.

A TEXT-BOOK OF MILITARY HYGIENE AND SANITATION. By Frank R. Keefer, M.D., Lieutenant-Colonel, Medical Corps, United States Army; Professor of Military Hygiene, United States Military Academy, West Point. 12mo of 305 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$1.50 net.

This book is peculiarly appropriate at the present time, when war's horrid front obscures pretty much every other interest in civilization. The "hospital corpse" (standard military joke) is an institution not nearly so much respected as it should be, in times of peace. In war the Hospital corps comes into its own; and transcends in importance any other military department. For not only must the wounded be saved, when possible, from death; but those yet uninjured combatants must be safeguarded from the camp diseases (which latter destroy three lives to one by shot and shell). This book is a superbly concise and adequate treatise.

It has a valuable glossary for the interpretation of medical and scientific terms to minds other than that of the doctor and the nurse. And it is exhaustively indexed. It can easily be carried in the coat pocket; and should be a vade mecum in active campaigning.

HE WHO WON THE WORLD. By The Rev. Edward Payson Powell, author of How to Make a Home in the Country, The Country Home, Orchard and Fruit Garden, etc. Sherman, French & Co., Boston, Mass., 1914. In these war times nothing is so essential to study anew, "lest we forget" the teachings of Him whose message was peace and whose gospel was love. Mr. Powell has given the world a beautiful poem indeed. The book would be peculiarly appropriate for a gift the coming holiday season.

SHORTHAND dictation taken by one stenographer was thus transcribed by another:

"We are in respite of your litter of the 13th inst. and in repeal would say that we will manicure the information requested and reply by rotten mail.

"Hoping these meats with your April, we remain,

"Yours tra-la."

VEGETABLE LORE.

Be like the cabbage—get a head—
Though on small celery;

Just manifest an onion's strength
And climb adversity.

Lettuce all be up and doing;
Things don't turnip when we wait;
If we use a little pepper
We can beet decree of fate.

Be as patient as a wormwood;
Try to cast dull caraway;
And some thyme you'll see the radish
Dawning of a brighter day.

—American Florist.

A WRITER in Collier's Weekly gets ecstatic over "a Scotch highball with a big cube of ice in the bottom of the glass." When one sees ice sinking to the bottom of a glass of fluid and staying there, it were better for him to change alcoholic drinks for something non-spirituous, at least for a season.

JUDGE (to woman asking separation)— How long have your relations been unpleasant?

Woman—Your honor, my relations have always been pleasant; it's his relations that are the old grouches.—Boston Transcript.

"What we need is tax reform," he said.
"What we need is tariff reform; what we need is trust reform; what we need is social reform; what we need is money reform."

"What you need is chloroform!" shouted a man in the crowd.

THE patter of tiny feet was heard from the head of the stairs. Mrs. Kinderby raised her hand warning the others to silence.

"Hush," she said, softly. "The children are going to deliver their good-night message. It always gives me a feeling of reverence to hear them—they are so much nearer the Creator than we are, and they speak the love that is in their little hearts never so fully as when the dark has come. Listen!"

There was a moment of intense silence. Then—

"Mamma," came the message in a shrill whisper, "Willie found a bedbug!"—National Food Monthly.

NURSING DEPARTMENT.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS 1HAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

WITH THE COMPLIMENTS OF THE SEASON.

If you are sighing for a lofty work,

If great ambitions dominate your mind,

Just watch yourself, and see you do not

shirk

The common little ways of being kind.

ELLA WHEELER WILCOX.

TO SWEEP OR NOT TO SWEEP.

Dust is probably the worst nuisance that the cleanser of our houses has to conquer. It is not only everywhere but it is everywhere out of place. Strictly speaking, however, dust is a normal constituent of the atmosphere, simply because it is found wherever there is air, unless it is removed artificially; and this is what every careful housekeeper would be glad to do. Dust contains a little of everything, organic and inorganic. Harrington in his book on Practical Hygiene says "It includes particles of animal matter, vegetable substances of every kind including bacteria and moulds, sea salt, matters swept from the soil by the action of winds, those discharged by volcanoes, others from manufacturing establishments, from chimneys, and from the millions of meteorites which daily fall from interplanetary space. ordinary combustion of illuminating gas yields millions and millions of particles of carbon for every individual cubic foot." Micro-organisms are very abundant in the air of all inhabited places, less abundant in the country than in cities, and absent only at altitudes of over one mile, or at distances of 120 miles or more from land. In cities we breathe about ten times as many bacteria and moulds as in the country. In all places we breathe fewer germs at night than in the day time—a fact that proves the fallacy of the popular suspicion con-cerning "night air."

The dust of factories and shops is either poisonous or irritating—it may be both. It

pervades every place and complicates every process where liquids are not used. In fact, we might well change the word industry into the more expressive word in-DUSTry; the pun is quite pardonable. Many a worker has suffered disease or death from the inhalation of the dust arising from the work, and every sanitary work room is provided nowadays with apparatus for preventing dust or securing its removal. Of course, the one indispensable safeguard against this danger is perfect ventilation, a difficult thing to secure in any building.

The peril of dust is not confined to work rooms; it has to be met in homes, schools, hospitals, churches and every place where people come together. We know of one magnificent high school that has installed a vacuum cleaner at the handsome cost of \$5,000. It is a very wise economy, but the average home and even the average public building still looks upon the vacuum cleaner as too expensive a luxury. What else can we use to rid ourselves of the plague of dust? Surely not the broom?

Prophylaxis is just as important in dealing with this evil as in other matters sanitary. In the first place, a well kept city will prevent the dust nuisance out of doors by laying smooth pavements and keeping them clean. We should remember that the dust blows up more easily from a smooth pavement than a country road; we must not give it a chance to accumulate and blow into our houses every day and all

day. Street sweepers that flirt the dust into the air are abominable nuisances, worse than nothing. The trouble can easily be avoided by sprinkling the streets before sweeping, or more perfectly by flushing with plenty of water and washing the dirt into the sewers. Our street cars should be kept reasonably clean, not unreasonably filthy, and should set the example to all other conveyances that use the public streets. We are a clean people but we have not formed the habit of requiring cleanliness everywhere as we would on our own premises.

The prevention of dust in the home is a matter well worth our care. The small boy is frequently met at the door by the stern guardian of the fold who demands that he shall clean his feet before venturing within. It would be well if this rule applied to every one, even to the removing of shoes worn on the street for foot coverings better adapted to house wear. Fortunately the trailing skirt is no more—the ample train that dragged into the house all manner of things vile and unspeakable collected from the streets and walks, that even fetched dirt from without into the ladies' closet and hung it up to drop for days and weeks on the floor. How soon will this blessed thing be "in style" again? The clean house will relegate all garbage to the proper receptacles therefor, even if dusty clothing has to have a brushing on the porch before coming through the door. The clean house will not abound in "dust traps," those manifold contrivances for the catching and holding of debris, otherwise known as ornaments, bric-a-brac, draperies and what not. Some dust collecting surfaces and angles there must necessarily be in every house but a very little ingenuity will reduce them to their lowest terms without making home any less home-like, although it may be less like a junk-shop. The wise housekeeper will learn how to run the stoves and the furnace with the minimum output of dust, and the basement furnace is often the chief offender in creating this nuisance.

Surely prevention is better than cure, in dealing with such a danger.

When the awful moment arrives that we must go after the dust and drive it away, what shall we do? How shall we make our work thorough and run the least risk of bronchitis, coryza, or that dreadfulsounding, more dreadful-acting malady called pneumonokoniosis? The work is pretty well laid out for us by a writer in

the International Hospital Record, speaking of hospitals:

The first essential in keeping a hospital clean is to keep it perfectly free from dust. Dust in a ward is not only dirt—it is danger. The mode of cleaning must vary according to the surface to be cleaned, but the dust must be removed thoroughly, regularly and frequently; not stirred up and allowed to settle again somewhere else, but entirely removed. The floors, walls, windows, door-frames, wainscoting, cornices, mouldings, backs and top ledges of picture frames and mirrors, door-sills, tops of doors, mouths of airshafts, the swinging transoms, the cupboards and tops of cupboards, and wardrobes, fireplaces water closets, bathrooms, clothes shafts, dust shafts—in fact, every square inch of surface must be kept absolutely free from dust.

One writer has said: "Do as little old-fashioned sweeping as possible in the wards. No one who has given much attention to these matters can look on with patience while an attendant flourishes a broom in a ward in the middle of a thick cloud of dust, not one-tenth of which is got rid of, but which flies up and settles again on every ledge and cornice, drifts over the beds and bedclothes, and, what is worse, drifts into the lungs and pores and eyes of the patients. In sweeping, a great deal of dust will escape in spite of every care, and drift into fireplaces, register flues, ventilating flues, open places of every kind, corners and cracks of every kind; therefore, all such places must be carefully looked after and carefully cleaned out at regular fracturation to the corner and the carefully cleaned out at regular fracturation. ular, frequent intervals. In such places as these, left unwatched too long, dust will be found packed and felted in thick rolls like bits of dirty blanket; and such deposits as these are not only disgraceful evidences of ignorance and neglect, but contain germs of hospital disease. For the sweeping that cannot be avoided, use on hardwood floors soft hair brooms in long strokes which carry the dust gently before them, instead of allowing it to rise and diffuse itself through the air. Do not sweep from one end of the ward through to the other, driving all the dust along the whole ward. Begin in the middle and sweep first one way and then the other, constantly using a dust-pan; but sweep as little as possible in the wards. Feather dusters should never be used, unless it may be to bring the dust down from high levels to lower ones when it can be reached and taken away with damp cloths or sponges. Nothing will really remove dust but damp cloths or sponges. Use as little water as possible, and use a little carbolic acid or soda in the cleaning water. Cleaners, unless watched, never change the water in their buckets often enough, but go on dabbing the floor with the dirty fluid; this, and their propensity always to use too much water on floors, should be watched and checked."

This is most excellent advice, applicable with slight modification to other places as well as the hospital. We might add for the benefit of those who are driven to use the broom on occasions like house-cleaning or on large bare floors, the following directions, from the same journal, for making a sweeping compound which will catch and

hold most of the dust, if the sweeper is not too violent in his action:

A good sweeping compound may be made as follows: Mix ½ pt. of warm parafin oil with 2 oz. of melted parafin wax and add 2 oz. of artificial oil of sassafras. Then pour the mixture into 10 lbs. of sawdust and work the whole thoroughly together. Add to this mixture 4 lbs. of clean sand and ½ lb. of coarse salt. Each article mentioned is comparatively cheap, and the compound can be kept in an open container.

compound can be kept in an open container.

The Department of Health in Buffalo distributes to the city a very practical leaflet on "Dry sweeping and feather dusting." A few quotations from this useful message may serve to complement our own

suggestions.

THE HOUSE IS A HARBOR FOR DUST. HOW TO GET RID OF DUST.

If you wish to get rid of dust you must not stir it up, for as soon as it gets into the air it is beyond your control. Before sweeping, if sweeping is necessary, it is well to scatter on the floor some moist material, such as wet sawdust or bits of moistened paper. While sweeping the windows and outside doors should be opened as widely as possible, and the door communicating with other parts of the house should be closed. Dusting should always be done with a moistened cloth, which should be washed before it has a chance to dry.

Where the floors are bare, it is unnecessary and most unwise to sweep with a broom. The dust can be much more effectively moved by wiping up with a brush or with a cloth damp-

ened with water, or oiled.

Of course, dust should be destroyed or placed in covered receptacles. On no account should

it be dumped into the yard or the street or into any open receptacle where it can be dislodged by the wind and distributed to other houses.

DUST IS PARTIAL TO CHILDREN.

Dust falls, like the rain, upon the just and unjust, but in all places the children are exposed to the densest and coarsest part of the dust cloud. They creep or run about in an atmosphere that is much more heavily charged with bacteria, dirt and other obnoxious refuse than the air breathed by the adults at a height of three or four feet above the children's heads. It is important, therefore, that the floors of rooms in which children live should be so covered that they may be frequently cleaned without flirting dust into the air. Oiled or varnished floors answer the purpose best, and may be covered with rugs or other material that can be easily removed and cleaned out of doors. Dogs and cats which have the freedom of the neighborhood are liable to bring into the house, into the hands and mouths of the children, all sorts of unsuspected and indescribable filth. You do not wish your child to play with dirty children. How about the cat and dog?

Many of the most stubborn diseases that afflict the operatives in factories and the employes in offices and stores are due to the polluted air which they are constantly inhaling. You should know what is necessary in order to protect yourself and your premises from dust and you should demand this protection whenever possible

demand this protection whenever possible.

Would you allow your neighbor to throw his
garbage into your yard? Why should you allow
him to defile the air of your house with dust—
perhaps with the germs of consumption?

If we realize that dust is poison we will abhor it. Much of the dust to which we are exposed is poison.

WORK AS A CURE.

Employment, which Galen calls "nature's physician," is so essential to human happiness, that indolence is justly considered as the mother of misery.—Burton.

THIS progressive age is very fond of new ideas. They generally take well. We hear a lot about the "New thought" but when we investigate it we find that a few people are thinking and talking the same old things that our ancestors thought and said centuries ago. "New thought" isn't really new. It is merely what we have forgotten. It is thought revived. We should be delighted, however, to know that some people are thinking, even if they think it is new. Probably it is new to them, and refreshing.

So it is with the therapeutics of work, or the "work cure" or whatever it is called. Galen recognized it, not to speak of earlier authorities. The great monasteries of the Middle Ages practised it, believing that "idleness is the invention of the Devil." To-day we are making new applications of the old truth and giving work its rightful position among other measures used to restore health to the unsound, especially to those whose mentality is deficient or diseased.

We have seen the convicts in a large penitentiary beseeching their keepers for work to employ their time and tone up their bodies. Nature impels them to some sort of physical exertion. The principle is recognized in most of our great institutions for the feeble-minded and the insane. The patient who can do no work is regarded as unfortunate, hopeless. To be sure, there are some conditions of insanity, usually

transient in duration, which demand complete rest and relaxation. But these are exceptions to the rule. The careful selection and prescription of work is regarded in many institutions as of equal importance with the prescribing of diet or medicines.

Work for institutional cases has a tremendous economic importance, for with proper opportunities the work of the institution, in farms, gardens and shops can be made to relieve the tax payers of a considerable burden of expense, while it perpetuates the habits of work in a small proportion of the patients who are later discharged as cured or improved and go out to resume their places in the industrial world.

Now that work is really a department of applied therapeutics, it is important for every nurse to know something of its application to different conditions, its dosage, counter-indications, etc. It is interesting to see that in some places the nurses are taught to qualify as instructors or supervisors of employments used in "the cure." It is a good specialty, and will be better some day

WILL SURGERY LEARN ANYTHING NEW FROM THE PRESENT WAR?

THE following brief comparison of the medical and surgical records of recent wars is made by Dr. Walter M. Brickner in an editorial in the American Journal of

Surgery:

The surgical annals of the Boer war make vastly different reading from the medical and surgical history of the Civil War, for example, with its grim records of amputations and hospital gangrene; and the camp sanitation and field hospital work of the Japanese in 1904 were, likewise, vastly better than those in our own army in the Spanish-American war only six years earlier. But to-day military hygiene is standardized and well-nigh perfect, and the behavior and treatment of wounds by modern missiles are quite well established. The character of these missiles has not been changed as far as we know, since the Turko-Italian and the two Balkan wars. It would seem, therefore, that the surgical experiences of the present great war will

differ in volume, rather than in kind, from those of the other all too frequent wars of very recent years. It is perhaps in the opportunities to apply our newer methods in vascular and intrathoracic surgery that the most fruitful opportunities will develop.

On these grounds Doctor Brickner prophesies "that the experiences of these battle fields will provide no important con-

tribution to surgery itself."

It is natural for us to ask in this connection whether the nurses who have the responsibility of caring for the disabled soldiers and returning them in fighting trim to the front, will develop any great improvements in their art. Judging from the reports already received, they seem to be making better time in this respect than in former wars.

BETTER THAN ANY ANTISEPTIC.

WRIGHT'S solution has been used in the clinic at Christ Hospital, Jersey City, for two years with the most satisfactory results. So says Dr. G. K. Dickinson, in the Medical Record (June 20th). Incidentally, he discusses a number of the antiseptics and other substances used more or less in surgical dressings. Balsam of Peru is stimulating but has proven "dirty and ineffective." Carbolic acid, with all its virtues, causes local irritation, disturbed healing, and often irritation of the kidneys. Bichloride of mercury, though convenient for use, "is not an ideal."

It coagulates albumen. It is destructive to tissue as well as to microbes. It does not assist Nature in producing local hyperemia and bringing out the serums for wound healing. To be

potent in a reasonable time, it must be made in strong solution.

Practically the majority of solutions used in surgery have not been potent because of the time required for antibacterial effect and the

little time given for this purpose.

For these and other reasons no antiseptics have been employed in wound treatment in Christ Hospital for two years or more. Wright's citrated isotonic solution produced such "delightful effects" that it has superseded all other fluids in the clinic. It is made according to this formula:

Sodium citrate, 0.5; sodium chloride, 3.0; distilled water, 100. (From Wright's "Studies on Immunization" p. 464)

"Studies on Immunization," p. 464.)
Dr. Dickinson says: "In all the thirty-seven years we have been attending surgical cases never have we noted such prompt results and

such beneficent effect as obtained by the proper application of this solution. We have practised long enough to be accustomed to the novel and the specific in action, but nothing in the surgical treatment of wounds has pleased as much as has it.

It is helping Nature on her own lines. Nature heals through hyperemia. The salt in the solution produces a mild hyperemia. Nature sends the phagocytes and opsonins into the wound. The citrate of sodium keeps the wound itself free from deposit and allows of the permeation of the healing serum. Wounds are embarrassed by

the accumulation of dead leucocytes and decomposing serum, and the presence of microbes in this accumulation, which neither the mercury salts nor the phenols efficiently controlled.

salts nor the phenols efficiently controlled.

Wright's solution keeps the wound clean, favors proper granulation, and hastens the separation of small sloughings. To be properly applied there should be sufficient gauze kept well-sopped. If hospitals and clinics would but thoroughly try out this simple, cheap, and physiologically effective method, the public would soon follow suit and the bichloride tablet and its dangers would disappear."

WITH THE AMBULANCE CORPS IN BELGIUM.

Among all the accounts of personal experiences that have come to us from the war zone, none is more graphic and human than the letters of Philip Gibbs to the London Chronicle and New York Times. The dispatch from which we quote paints a vivid picture of the dangers faced by some of the nurses and other courageous women who dare to go to the very front of this awful conflict.

Furnes, Belgium, Oct. 21.—The staff of the English hospital to which a mobile column has been attached for field work, has arrived here with a convoy of ambulances and motor cars. This little party of doctors, nurses, stretcher-bearers, and chauffeurs under the direction of Dr. Bevis and Dr. Munro, has done splendid work in Belgium, and many of them were in the siege of Antwerp.

Miss Nacnaughton, the novelist, was one of those who went through this great test of courage, and Lady Dorothie Feilding, one of Lord Denbigh's daughters, won everybody's love by her gallantry and plucky devotion to duty in many perilous hours. She takes all risks with laughing courage. She has been under fire in many hot skirmishes, and has helped bring away the wounded from the fighting around Ghent when her own life might have paid the forfeit for defiance to bursting shells.

Recently a flying column of the hospital was

Recently a flying column of the hospital was preparing to set out in search of wounded men on the firing line under direction of Lieut. de Broqueville, son of the Belgian War Minister. The Lieutenant, very cool and debonair, was arranging the order of the day with Dr. Munro. Lady Dorothie Feilding and the two other women in field kit stood by their cars, waiting for the password. There were four stretcher-bearers, including Mr. Gleeson, an American, who has worked with this party around Ghent and Antwerp, proving himself to be a man of calm and quiet courage at a critical moment, always ready to take great risks in order to bring in a wounded man.

It was decided to take three ambulances and two motor cars. Lieut. de Broqueville anticipated a heavy day's work. He invited me to accompany the column in a car which I shared with Mr. Ashmead-Bartlett of The London Daily Telegraph, who also volunteered for the expedition.

Then follows the story of a ten mile ride, into the firing zone with all its dreadful sights and sounds.

I was in one of the ambulances and Mr. Gleeson sat behind me in the narrow space between the stretchers. Over his shoulder he talked in a quiet voice of the job that lay before us. I was glad of that quiet voice, so placid in its courage. We went forward at what seemed to me a crawl, though I think it was a fair pace, shells bursting around us now on all sides, while shrapnel bullets sprayed the earth about us. It appeared to me an odd thing that we were still alive. Then we came into Dixmude.

THE SHELLING OF DIXMUDE.

When I saw it for the first and last time it was a place of death and horror. The streets through which we passed were utterly deserted and wrecked from end to end, as though by an earthquake. Incessant explosions of shell fire crashed down upon the walls, which still stood. Great gashes opened in the walls, which then toppled and fell. A roof came tumbling down with an appalling clatter. Like a house of cards blown by a puff of wind, a little shop suddenly collapsed into a mass of ruins. Here and there, further into the town, we saw living figures. They ran swiftly for a moment, and then disappeared into dark caverns under toppling porticos. They were Belgian soldiers.

AT THE RUINED TOWN HALL.

We were now in a side street leading into the Town Hall square. It seemed impossible to pass, owing to the wreckage strewn across the road. "Try to take it," said Dr. Munro, who was sitting beside the chauffeur. We took it, bumping over heaps of debris and then swept around into the square. It was a spacious place with the Town Hall at one side of it—or what was left of the Town Hall; there was only the splendid shell of it left, sufficient for us to see the skeleton of a noble building which had once been the pride of Flemish craftsmen. Even as we turned toward it parts of it were falling upon the ruins already on the ground. I saw a great pillar lean forward and then topple down. A mass of masonry crashed from the portico. Some stiff, dark forms lay among the fallen stones; they were dead soldiers. I hardly glanced at them, for we were in search of the living.

Our cars were brought to a halt outside the

building, and we all climbed down. I lighted a cigarette, and I noticed two of the other men fumble for matches for the same purpose. We wanted something to steady our nerves. There was never a moment when shell fire was not bursting in that square. Shrapnel bullets whipped the stones. The Germans were making a target of the Town Hall and dropping their shells with dreadful exactitude on either side

I glanced toward the flaming furnace to the right of the building. There was a wonderful glow at the heart of it, yet it did not give me any warmth. At that moment Dr. Munro and Lieut. de Broqueville mounted the steps of the Town Hall, followed by Mr. Ashmead-Bartlett and myself. Mr. Gleeson was already taking down a stretcher; he had a little smile about his lips.

A French officer and two men stood under the broken archway of the entrance between the fallen pillars and masonry. A yard away from them lay a dead soldier, a handsome young man with clear-cut features turned upward to the gaping roof. A stream of blood was coagulating around his head, but did not touch the beauty of his face. Another dead man lay huddled up quite close, and his face was hidden.

"Are there any wounded here, Sir?" asked our young Lieutenant. The other officer spoke excitedly. He was a brave man, but he could not hide the terror in his soul, because he had been standing so long waiting for death, which stood beside him, but did not touch him. It appeared from his words that there were several wounded men among the dead down in the cellar, and that he would be obliged to us if we could rescue them.

BRINGING OUT THE WOUNDED.

We stood on some steps, looking down into that cellar. It was a dark hole, illumined dimly by a lantern, I think. I caught sight of a little heap of nuddled bodies. Two soldiers, still unwounded, dragged three of them out and handed them up to us. The work of getting those three men into the first ambulance seemed to us interminable; it was really no more than fifteen or twenty minutes. During that time, Dr. Munro, perfectly calm and quiet, was moving about the square, directing the work. Lieut. de Broqueville was making inquiries about other wounded in other houses. I lent a hand to one of the stretcher-bearers. What the others were doing I do not know, except that Mr. Gleeson's calm face made a clear-cut image on my brain.

I had lost consciousness of myself. Something outside myself, as it seemed, was saying that there was no way of escape; that it was monstrous to suppose that all these bursting shells would not smash the ambulance to bits and finish the agony of the wounded, and that death was very hideous. I remember thinking, also, how ridiculous it was for men to kill one another like this and to make such hells on earth.

Then came the order to return with the wounded:

Along the country roads the fields were still being plowed by shells which burst over our We came to a halt again in a place

where soldiers were crouched under cottage There were few walls now, and inside some of the remaining cottages were many wounded men. Their comrades were giving them first aid and wiping the blood out of their eyes. We managed to take some of these on board. They were less quiet than the others we had, and groaned in a heartrending way.

THE LOST LEADER.

A little later we made a painful discovery: Lieut. de Broqueville, our gallant young leader, was missing. By some horrible mischance he had not taken his place in either of the ambulances or the motor cars. None of us had the least idea what had happened to him; we had all imagined that he had scrambled up like the rest of us, after giving the order to get away.

There was only one thing to do—to get back in search of him. Even in the half hour since we had left the town Dixmude had burst into flames and was a great blazing torch. If de Broqueville were left in that hell he would not have a chance of life.

It was Mr. Gleeson and Mr. Ashmead-Bartlett, who, with great gallantry, volunteered to go back and search for our leader. They took the light car, and sped back toward the burning town. The ambulances went on with their cargo of wounded, and Lady Dorothie Feilding and I were left alone for a little time in one of the cars. We drove back along the road toward Dixmude, and rescued another wounded man left in a wayside cottage.

By this time there were five towns blazing in the darkness, and in spite of the awful suspense which we were now suffering we could not help staring at the fiendish splendor of that

sight.

Dr. Munro joined us again, and after consultation we decided to get as near to Dixmude as we could in case our friends had to come out without their car or had been wounded.

The German bombardment was now terrific. All the guns were concentrated upon Dixmude and the surrounding trenches. In the darkness under a stable wall I stood listening to the great crashes for an hour, when I had not expected such a lease of life. Inside the stable soldiers were sleeping in the straw, careless that at any moment a shell might burst through upon them. The hour seemed a night; then we saw the gleam of headlights, and an English voice called

Ashmead-Bartlett and Gleeson had come back They had gone to the entrance to Dixmude, but could get no further, owing to the flames and shells. They, too, had waited for an hour, but had not found de Broqueville. It seemed certain that he was dead; and, very sorrowfully, as there was nothing to be done, we drove back to Furnes.

They reached home and carried their wounded patients into the convent which served as hospital. Then came the supper made gloomy by the absence of their leader.

A JOYFUL MEETING.

Then suddenly Lady Dorothie Feilding gave a little cry of joy, and Lieut. de Broqueville came walking briskly forward. It seemed a miracle;



it was hardly less than that. For several hours after our departure from Dixmude he had remained in that inferno. He had missed us when he went down into the cellar to haul out another wounded man, forgetting that he had given us the order to start. There he had remained,

with buildings crashing all around him until the German fire had died down a little. He succeeded in rescuing his wounded man, for whom he found room in a Belgian ambulance outside the town and walked back along the road to Furnes.

THE MEDICAL PROFESSION AND THE TRAINED NURSE.

By Miss Flora J. Brecht, Buffalo, N. Y.

In order to get a general idea of how the trained nurse is viewed by the medical profession, I asked forty or more physicians and surgeons in Buffalo to tell me what characteristics or attributes they considered most desirable in a trained nurse. The men and women to whom I put the question were our foremost physicians and surgeons, and represented many nationalities as well as all branches of medical work.

The more I thought about the subject, the more interesting it became, and although doctors, as a rule, are too busy for romancing, I wondered whether they would prefer short nurses, or tall nurses, blondes or brunettes. Perhaps a plump, motherly looking nurse would be considered more soothing than a tall, slender one.

The first reply, however, was more candid than candied and shattered all romance—just four words: "Keep their mouths shut." Ninety per cent. of the replies voiced the same opinion in other words.

Good health was considered the most desirable attribute, and I will place it first—good health, both physical and mental. A nurse should be free from those petty, annoying ills which beset mankind. A nurse who has a headache, or a toothache, or whose corns ache, cannot do justice to herself or her patient.

Mental good health presupposes selfcontrol. This attribute enhances every other good quality a nurse may possess and makes her valuable when no one else is available.

Mental good health includes cheerfulness; a long face may do for an undertaker,

but never for a doctor or a nurse. The psychic effect of cheerfulness on a patient can hardly be overestimated.

A nurse who is optimistic and resourceful in providing suitable diversion and entertainment for her patient is valuable. The ability to cut paper soldiers for the small boy, who is too sick to do it for himself, or to play a game of cards with the woman who although propped up in bed, is just dying to go to her card club and cannot—is not to be despised.

Second. A practical as well as theoretical training in a well equipped general hospital.

Third. Intelligence. Intelligence, Webster tells us, is the "exercise of the understanding." Truly good exercise, and recommended by all physicians. "Intelligence in a nurse," said one physician, "is far preferable to high education." A nurse should know not only how to carry out the doctor's orders to the letter, but how to act wisely in an emergency.

A nurse must never administer medicines on her own account without first consulting the attending physician.

"A large amount of training in general medical or surgical work is not necessary," said another; a nurse should be intelligent.

The intelligent nurse is up to date—keeps up with the newest technique of the profession, and often adds a general knowledge of massage to her attainments. An intelligent nurse, of course, would never repeat former sick-room experiences to a patient.

The intelligent nurse keeps her mind on her patient and her duties. The sick-room is no place for love making and the nurse who fondly imagines she can play a bit of this absorbing game with the young attending physician, is not worth anything.

Fourth. Neatness. This ranks with intelligence, and all doctors laid special emphasis upon it. A nurse should be neat in her person and neat in her work. A sloppy, untidy nurse is an abomination not to be tolerated, and in surgical or maternity work a careless, untidy nurse is positively dangerous.

Fifth. Honesty, without which no one can be eminently successful in any calling.

Sixth. Tact. Tact is an inclusive term and means so much. A nurse must meet all classes and all conditions of people, and has to change her manner of work according to each and every case. To-day she may be serving in the home of the humblest citizen, where frugality and economy

are imperative—to-morrow she may be in a home of plenty, where money is no object.

Tact means patience—for sick people are often cranky and hard to live with day after day.

Tact means self-abnegation. Unless a nurse can forget herself, her person, her troubles and her comfort, she cannot do the best work for her patient. Said one surgeon: "the nurse who thinks first, last and all the time of her patient is the one we tie to."

Seventh. Loyalty in the wide meaning of the term. As Professor Royce gives it—loyalty to self, to the patient, the physician, the family and to the community.

These attributes—and let me assure you many fine, noble women among the nurses possess them all,—these attributes make a splendid nurse and are considered most desirable by the medical profession.

MISSION HOSPITALS OF THE EMPIRE.

THEIR ACHIEVEMENT AND POSITION TO-DAY.

In every civilized country of the world in which hospitals have been established medical missionaries have been the pioneers. And even in India, while the Medical Service of the Government has long occupied the more important centres of population, and is gradually extending its beneficent activities even to rural districts, mission hospitals have led the way in several departments of hospital work and in the wilder regions.

Practically the whole existing medical work in China and hospitals for women in India are the most conspicuous proofs of these assertions. There are at the present moment about 800 medical missionaries at work in China. In fact, excepting the treaty ports and a few other places where military surgeons or doctors in charge of the various legations practise, virtually all scientific medical and surgical work in China is in the hands of missionaries. The enlightened statesmen who are now at the head of affairs in China are most desirous to secure for their country the advantages of Western medical science. And, looking round for possible instructors of the rising generation of Chinese doctors, the presence of this large body containing many men with the highest European qualifications has attracted their attention. The desire to make use of them has been an important factor in the changed attitude of the Chinese Government towards Christianity and missions in general.

MEDICAL MISSIONARIES IN CHINA.

Its present policy was shown in a speech reported in the Times of January 17, 1913. The China Medical Missionary Association had just held its triennial conference in Peking. Its members, seventy-three in number, were received by the President of the Republic, Yuan Shih-kai, who, in replying to an address presented by the missionaries, paid a warm tribute to them and to their work. He said: "I am delighted to receive the medical missionaries. We are most grateful to you for your charitable services. especially in the interior, where the importance of sanitary principles, once comparatively unknown, is being increasingly recognized owing to your labors. Many of you assisted during the plague, materially aiding in restricting the ravages of the disease which had alarmed the world, while during the revolution many of you faced dangers and difficulties in order to relieve the suf-

ferers. I am glad of this opportunity to offer you our most sincere personal thanks, and I hope that you will continue your labors, thus adding to the glory of your reputation and strengthening the bonds of friendship between your countries and ours." Formerly foreign doctors were looked upon with suspicion in China; dark tales were told of eyes taken out from helpless patients to make medicine, and of patients being killed to obtain certain parts of their bodies, and it was difficult to persuade a native to come into the hospital at all. To-day the hospitals are filled to overflowing, and patients will pay what to them are large sums for the privilege of being treated by the foreign doctor; while to be taken on as a hospital assistant and so get his foot on the ladder which may lead ultimately to a training in Western medicine is the ambition of thousands of the promising youth of China.

NEED FOR MEDICAL SCHOOLS.

One of the greatest needs of China today is medical education, and this the missionaries are seeking to supply. In most of the mission hospitals some sort of medical training has been attempted, but what is wanted is a well-equipped and well-staffed medical school in each of the great districts of China. Such a school has been in existence at Peking since 1906 and medical education has been long given at Hangchow, Fuhkien, and other hospitals which are now to be raised to the status of regular medical schools.

In India, where the customs of the country prevent Mahomedan women or those belonging to the respectable Hindu castes from entering a hospital to which men are admitted either as patients or doctors, the mission hospitals were for long the only ones available for women. The Dufferin Hospitals which have been opened under Government auspices were admittedly the outcome of missionary example, though conducted strictly on secular lines and so able to secure the support of wealthy natives. Of the Zenana missionary hospitals the best known is that carried on by the S.P.G. and Cambridge Mission in Delhi. Its work has won it recognition from the Government of India in various ways, and its reputation secured it special honor from her Majesty the Queen during her visit to Delhi for the Durbar in 1911. It is the successor of the first hospital for women and children established in India, but the site has been twice removed and is now just outside the city walls. The work is carried on by four European women doctors, three nursing sisters, and twenty-six Indian nurses and probationers. In 1912 over 1,000 operations were performed.

Similar hospitals have been established by the S.P.G. at Cawnpur and Karnal, and by the Bible and Zenana Medical Mission at Lucknow, Benares, and Patna; while many others in less famous cities are carried on by these and other missionary societies.

The Cawnpur Hospital has a special interest attaching to it from its proximity to the scene of the massacres and has been called the revenge of the women of England for the massacres of the Mutiny, having been erected entirely by subscriptions from English women. The death of several members of the staff from plague caught from their patients had the curious effect of quieting the populace when violent riots had taken place owing to the prevalent idea that the plague had been introduced by the English to diminish the native population.

On the North-West Frontier of India there is a very remarkable chain of mission hospitals, worked by the Church Missionary and Church of England Zenana Missionary Societies. These are attended by many patients from places far outside British territory, and are recognized as having a most pacific effect on the frontier, besides relieving an immense amount of suffering, untouched by any other medical agency. In Kashmir, too, the work of the Mission Hospital with its 245 beds is widely famous.

NATIVE STAFFS.

The work of training native nurses, which is carried on at the hospitals at Delhi, Cawnpur, and other places, is peculiarly valuable in view of the widespread ignorance in India of even the most rudimentary ideas of the proper treatment of the commonest diseases, and of women in childbirth. A medical school for women has also been established at Ludhiana in the Punjab, where a better class of women can go and will enter the Government schools to be taught by and with men.

In South India the largest mission hospitals are in the Native States, where the same provision as the Indian Medical Service makes for the needs of the people in British territory does not exist.

From the time of Livingstone Africa has had a special attraction for medical missionaries, and hospitals have been established in a very large number of Anglican and Protestant mission stations in all parts of the Continent. The most remarkable are those of the Church Missionary Society in Uganda and Egypt. The hospital at Mengo in Uganda has 168 beds, and in 1912 the in-patients totalled 2,078. At old Cairo, though the regular hospital beds only number 89 and the in-patients 1,334, a species of resident out-patient accommodation has been established especially for the treatment of that scourge of Egypt, ankylostomiasis, where 300 patients can be housed and 4,812 cases were treated during the year 1912 with remarkable success.

Perhaps nothing has had so great an effect in breaking down the tyranny and power of the witch-doctor in Africa, with all the resultant evils of tribal vengeance and murders, as the success of proper medical and surgical treatment. It has proved a civilizing agent of the first importance, and the missions have almost invariably been the pioneers in this. Such was the case in Madagascar, but the French, in pursuance of their anti-religious policy, have now suppressed the work of mission hospitals there, and made provision to some extent for the needs of the people by establishing Government medical aid. Japan affords a somewhat parallel case, as the Government now prefers to provide on a secular basis for the needs which at first had no provision to meet them, except that afforded by mission hospitals.

In Persia there is a remarkable hospital of the Church Missionary Society at Ispahan, with 180 beds and a record of just 600 major operations in 1912. As might be expected from the state of the country, serious gunshot wounds form a large proportion of the cases in Persia, and the mission doctors are called upon to treat Government servants, soldiers, thieves, and highwaymen alike.

Separate mention should be made of leper hospitals, which are carried on by various missions, sometimes in connection with and sometimes quite distinct from other medical work. In uncivilized countries this is a sphere left exclusively to missionaries. The largest leper asylum and hospital in India is at Purulia in Chota Nagpur, carried on by a German mission, but supported by the Mission to Lepers Society of this country. No other medical work is connected with it This society has many other leper hospitals, both in India and China. Some mission hospitals in those countries set apart a certain number of beds for lepers.

MISSION HOSPITAL DISPENSARIES.

In studying the statistics available it will be seen that the dispensaries attached to mission hospitals return very large numbers of out-patients, but it is difficult to institute any comparison of numbers between them or with other hospitals—e.g., those under the English Government in India—as a uniform system of statistics of out-patients does not obtain. Some return figures representing "new cases" which should be multiplied by two or three in comparing them with those which return only attendances, where the same patient may be included many times.

But, however computed, the combined numbers show an enormous amount of philanthropic effort at a comparatively trifling cost. The expense of a bed for a year in some of these mission hospitals is estimated as low as £3, in few does it exceed £10, while the average expense of a bed in a London hospital works out at £81. Making allowance for the difference in the cost of living in uncivilized countries from that in England, this indicates a careful management of the funds entrusted to the societies by the benevolent public.—The Hospital.

PAINFUL HEEL.

PAINFUL heel is frequently due to an exostosis, a spur, on the bottom of the calcaneum. In cases of long standing rebellious pain under the heel, it is wise to radiograph in order to see whether this lesion is present. While we sometimes find this condition in patients complaining of no pain under the heel, it has been pretty well dem-

onstrated that removal of these spurs when present in "painful heel," is followed by abatement of symptoms. Before, however, such spurs are removed, the attempt should be made to take pressure off from them by means of well-fitting arches, felt rings, or other devices designed to take weight off from the painful heel.—E. S. Geist, in The Saint Paul Medical Journal.

AN IRISH AMBULANCE TRAIN.

An enterprising step has been taken by the Great Southern and Western Railway Company in Ireland, which, to meet the possibility of wounded being landed on the south coast, have built and equipped at their Inchimore works a complete new ambulance train. By the adaptation of nine bogie coaches ordinarily used for main line parcel traffic, five "wards," with twenty beds each, have been fitted in two tiers. To each car an end gangway has been fitted, by which access is gained to the pharmacy car, which is given the central posi-The so-called pharmacy car comprises in separate divisions a surgery, which is zinc-lined, pharmacy, linen stores, medical officer's room, and stores for bandages and other equipment. The corridors are made wide enough to accommodate a stretcher, while a sliding door is fixed so as to allow a patient to be taken sideways into the surgery. There is a dining-room car for the staff, fitted with lavatory accommodation, and the seats are upholstered in such a way as to be convertible for sleeping purposes if required. There is also a sleeping saloon for the medical and nursing staff, with beds for two doctors and two nurses, and, divided off, for two attendants. A stores car, more or less on the ordinary corridor plan, with a final guard's van, brings up the rear. The ventilation and lighting have been carefully studied, and electric bells and steam heating are provided throughout the train, which is nearly two hundred yards in length. —The Hospital.

Questions and Answers.

THE following answers are not "official." They are prepared for the Editor.

VERMONT BOARD OF REGISTRATION OF NURSES.

OBSTETRICAL NURSING.

Examination at Montpelier, Vt., November 13, 1913.

Answer 10 Questions only:

1. Define ovulation, conception, embryo,

extra uterine pregnancy, lactation.

Ans. The formation and discharge of the ovum from the ovary. The impregnation of the ovum by the spermatozoon. The product of conception up to the end of the third month. Pregnancy in which the fetus is not contained in the uterus, but somewhere outside. Secretion of milk, or period of secretion.

2. Define abortion, miscarriage, premature labor.

Ans. Expulsion of the fetus during the first 28 weeks of pregnancy. Expulsion of the fetus at any time before the natural termination of pregnancy. Labor occurring from the 28th to the 38th week of pregnancy.

3. When during pregnancy does the fundus uteri reach, (a) the symphysis pubis; (b) the umbilicus; (c) the ensi-

form cartilage?

Ans. (a) About the beginning of the fourth month. (b) At the sixth month.

(c) Toward the end of the ninth month.
4. (a) What is vertex presentation in labor? (b) What is the normal or first or most common position?

Ans. (a) The presence of the top of the fetal head in the mouth of the womb. (b) O. L. A., in which the occiput is in the left anterior portion of the pelvis.

5. Name three micro-organisms which may be the specific cause of puerperal infection.

Ans. Streptococcus, staphylococcus,

gonococcus.

6. Describe the birth of a baby, (a) the power which forces it out; (b) the bony canal through which it passes; (c) the soft parts it passes; (d) the change in the manner of oxygenation of the blood immediately after birth.

Ans. (a) The muscular walls of the uterus contract rhythmically, and the abdominal muscles assist by making pressure or "bearing down" as in the process of defecation. (b) The true pelvis is made up of the two innominate bones on the

front and sides and the sacrum and coccyx behind. It is narrow or shallow in front and deeper behind, which gives to the canal a decided curve toward the external opening of the birth canal. (c) The inner surface of the pelvis is covered with muscles and contains many nerves and vessels. In traversing the birth canal, the fetus passes the bladder, rectum, ureters, urethra, os uteri, perineum and vulva, or external genitals. (d) Before birth the blood is oxygenated in the placenta. After birth the child breathes air into its lungs which supplies oxygen for the blood.

7. Give general rules for feeding a baby, i.e., quantity at each feeding, intervals between feedings, number of feedings in 24 hours and total amount in 24 hours, during first week, second week, sixth week

and sixth month.

Ans. First week: $1\frac{1}{2}$ -2 ounces, every three hours, making 7 or 8 feedings and a total of 10-15 ounces. Second week: $2-3\frac{1}{2}$ ounces every three hours, making 7 or 8 feedings and a total of 15-22 ounces. Sixth week: 4-5 ounces, every 4 hours, making about 5 feedings and a total of 24-32 ounces. Sixth month: $6\frac{1}{2}$ -8 ounces every four hours, making about 5 feedings, and a total of 32-40 ounces.

8. Define and give directions for prac-

tising gavage.

Ans. Feeding by the stomach tube. Use a small soft rubber catheter connected with a small funnel at its outer end. Hold the baby on the lap upon its back. Fill the tube with milk, warmed to right temperature, clamp tube between the fingers and pass it down the throat about four inches. Let milk flow in slowly, taking care to ex-

clude bubbles from the funnel. After withdrawing tube let child lie quietly on the lap for a few minutes and watch it to prevent strangling in case some of the milk is regurgitated. Of course, the milk, tube, funnel and everything used in this procedure must be sterile.

9. What is the most frequent cause of digestive disorders in hand fed babies?

Ans. Contamination of milk with bacteria.

10. What is citrated whole milk, and what are some of the advantages claimed for its use?

Ans. Milk to which sodium citrate has been added in the proportion of one to five grains to the ounce of milk. It precipitates the lime salts in the milk and makes a softer, more flocculent curd of paracasein in the infant's stomach.

11. What danger is there in the use of the vacuum bottle (thermos bottle) for

keeping infants' food hot?

Ans. As the temperature is necessarily below that required for Pasteurization, the bottle acts as an incubator, and the bacteria in the milk increase often to an alarming degree. It is better to keep the feedings cold until the time for using them.

12. What is the Bacillus lactis Bulgaricus? For what purpose is it sometimes given in connection with the bottle feed-

ing of infants?

Ans. A bacillus producing the lactic fermentation, or souring of milk. It exerts a beneficial influence in the digestive tract, and prevents the development of the most injurious pathogenic bacteria found there; in this way it promotes the healthy functioning of the digestive organs.

SURGICAL NURSING AND BACTERIOLOGY.

Examination at Montpelier, Vt., November 13, 1913.

Name each answer and letter each subdivis ion. Do not write the questions.

1. Give minute directions for preparing your hands for a surgical operation.

Ans. Roll sleeves above elbows, scrub hands and forearms ten minutes in hot soap and water, using nail brush and changing water frequently; clean around nails with blunt orange-wood stick; immerse hands and forearms in alcohol for one minute, rubbing the skin thoroughly; repeat this

process in bichlorid of mercury 1-1000, for three minutes.—(Sanders.)

2. When is drainage used and why? (a) Name four methods and material that may

be employed.

Ans. When wounds are unclean or tissues bruised, and blood, serum or pus is liable to collect. (a) Drainage tubes of soft rubber, glass, or decalcified bone may be inserted so as to drain the deepest part of wound. The cigarette drain is made of

a roll of sterile gauze covered with protective tissue; it is used like a tube. A bundle of sterile catgut or horsehair may be used in the same way. The wound may be loosely packed with sterile gauze, acting as a wick to draw out discharges.

3. How would you care for and prepare a patient during twenty-four hours before an abdominal operation ready for the surgeon?

Ans. Keep patient in bed, quiet, for a day or two before operation. Save a specimen of urine for examination. Secure a good cleansing of the bowels. Give soft diet only, and nothing but liquid for the last meal preceding operation. Give no nourishment within less than four hours of operation. Give a cleansing bath, taking special care to see that the abdomen and thighs, especially the umbilicus, are thoroughly clean. The surgeon may order the site of the incision to be shaved and treated with antiseptics some hours before the operation; in such a case, protect the area by an antiseptic compress.

4. Define the words, (a) sterile; (b) asepsis; (c) disinfectants; (d) sterilization. (e) What is most effective?

Ans. (a) Free from micro-organisms. (b) Freedom from infection, or septic matter. (c) Agents or processes destroying infection. (d) Process of freeing substances from septic micro-organisms. (e) Heat.

5. What is an ideal chemical disinfectant?
(a) Name four chemical disinfectants.

Ans. One that accomplishes the work of disinfection with the least injury to the substance disinfected and the person using it. (a) Alcohol, carbolic acid, bichlorid of mercury, formaldehyde.

6. How would you remove a foreign body from the ear? (a) What precautions should be observed?

Ans. Inject warm water with a syringe.
(a) Sterilize everything used. Be very gentle; use as little force as possible in injecting; direct the stream toward the upper wall of auditory canal and be sure that there is room for the return flow to pass out. After removal of the body, dry the ear with absorbent cotton. Normal salt solution or saturated solution of boric acid may be used.

7. Name four ways to stop hemorrhage.
(a) How would you stop hemorrhage in foot or hand?

Ans. Pressure; application of heat or cold; direct application of astringents or styptics; indirect action of remedies administered by mouth or hypodermatically. (a) Elevate the bleeding part, and make continuous pressure on the arteries supplying it with blood. If possible, place a firm compress directly over the wound and fasten tightly.

8. What is normal salt solution? (a) Give formula. (b) When and why used? (c) Describe different ways it is used.

Ans. A watery solution of common salt in the proportion existing in blood. (a) Solution of sodium chlorid in water 9-1,000, or nine-tenths of one per cent. (b) Where a non-irritating, stimulating fluid is required, as in burns and all denuded surfaces, in the bladder, vagina, rectum, and in hypodermoclysis. Used in these cases because it is bland and unirritating, being more easily tolerated than pure water. (c)As a wash, for cleansing or irrigating; as a lotion, for moistening and stimulating repair; as an enema; as a general stimulant or to supply fluids to the body after exhausting hemorrhage, it is used subcutaneously or per rectum.

9. What is the difference between fracture and dislocation? (a) Define a compound fracture.

Ans. Fracture is a solution in the continuity of a bone; dislocation is the displacement of a bone at its articulation with another bone,—an affection of the articulation. (a) Fracture with an external wound leading from the body surface into the bone.

10. Name the germ in a septic wound.

Ans. Streptococcus, generally, though many other varieties may be present.

11. Define a burn of first degree. (a) A burn of second degree. (b) A burn of third degree.

Ans. Burn causing reddening of the skin. (a) Causing destruction of true skin and blistering. (b) An injury to the underlying tissues.

12. Give three different kinds of hemorrhage. (a) How distinguished.

Ans. Arterial, venous and capillary. (a) Bright red blood escapes from an artery with a spurt. Dark venous blood escapes from a vein in a slow, steady stream. Blood escaping from capillaries merely oozes from the surface.

PRACTICAL NURSING AND DIETETICS.

November 13, 1913.

1. Define objective and subjective symptoms and name some important objective symptoms.

2. (a) Name three types of abnormal respiration. (b) What is meant by a

"cyanotic condition"?

3. What articles would you prepare for

a stomach lavage?

- 4. (a) Give nursing measures to induce (b) What nursing measures urination. could be used to relieve sleeplessness?
- 5. (a) How would you examine feces for worms and calculi? (b) How would you apply cold compresses to an eye?

6. (a) Define Technique. (b) Mention

some complaints frequently made against nurses in private work.

7. (a) How would you make junket? (b)

State the source of rennet.

8. How would you peptonize a pint of milk by the cold process?

9. Name the ferments of the pancreatic

juice.

10. How would you prepare beef juice?

11. In what organs and by what enzymes are starches digested?

12. Outline the daily care of an ice box. Do not write questions: Number them and letter subdivisions. Only answer ten questions.

MATERIA MEDICA AND URINALYSIS.

November 13, 1913.

1. (a) By what method of administration would you get the quickest action of a drug? (b) What drugs are usually given in this way?

2. Give the ordinary name of mild chlorid of mercury. State its action and

3. What is meant by the cumulative action of a drug? In the use of what drug should one be specially watchful for these symptoms?

4. (a) Which is stronger—a Tincture or a Fluid Extract? (b) What symbol would you use to indicate that a medication is to

follow meals?

5. What are the usual causes of hypodermic abscesses? Where should hypodermic injections never be administered?

6. Mention five paths by which medicine may enter into the circulation.

7. Define Carminative, Escharotic, Disphoretic, Hemostatic.

8. (a) Is the normal reaction of urine acid or alkaline? (b) What does albumen in the urine indicate?

9. How would you collect a specimen of urine from an infant?

10. Give in detail a test for sugar in

11. Name two diuretics commonly used. Give some results of carelessness in catheterization.

12. What is the microscopic appearance

of urine containing blood?

Do not write questions: Number them and letter subdivisions. Only answer ten questions.

Have your answers to these questions ready for comparison with the answers to be given in a later number of THE GAZETTE.

"Business has fallen off at our summer resort," observed Dr. Ben Trovato; "people are inclined to blame the railroad over which all our patrons must travel. Prehistoric rolling stock, raised commutation rates, a deal with the express company about baggage and hand packages, soft coal, plush covered seats with the thermometer at 90° F., are a few of the characteristics of our route to By-the-Sea. We are allowed to swelter in the station before leaving and, to add insult to injury, a boy sells palm leaf fans to passengers fully entitled to motor fans and two cents' worth of electricity. Rather than put up with two hours daily of this sort of thing, many men prefer to fight the summer at home. As a conscientious medical adviser, I cannot advise them to do otherwise."

TECHNICALITIES

ITEMS of value to nurses in their work will be welcome to this column

Koumiss.—Koumiss is another preparation from milk that is valuable in fevers or generally impaired digestion. The original koumiss was made from mare's milk, using the milk from mares that ran wild on the steppes of Russia. In this country cow's milk is used, and fermentation is by kephir grains; both lactic acid and vinous fermentation take place and the product is readily digested. It is expensive, but it has a large amount of nutritive constituent rendered easy of absorption.—Lulu Graves, in Modern Hospital.

Lost His Pay.—The son of a former governor of North Carolina was refused the extra increase of salary in the U. S. Navy, to which all native born are entitled, because he could not furnish an official birth certificate. Until this year his native state did not consider it worth while to keep records of births and deaths. Gradually such official records will be required as proofs all over the world.—Buffalo Bulletin.

KEEP MILK COLD.—Prof. H. W. Conn of Wesleyan University says, that at a temperature of 50° Fahrenheit, the bacteria in milk will increase in 50 hours from 3 to 30 times the initial number, and if the temperature is 70° Fahrenheit, they will multiply 40,000 times. Hence keep milk cold.

Sourness is the popular test of the quality of milk. People will buy and use any old milk however dirty, if it is not sour. Milk will not sour for several days if packed in ice, for the acid forming bacteria cannot grow. But the cold does not entirely stop the growth of other germs.

A given sample of milk may not be sour, and yet be rotten with the presence of innumerable other bacteria.

The great mortality of infants of two years old and under, in hot weather, is mostly due to spoiled milk.

Milk that is more than 24 hours old should never be fed to infants or invalids. Grocery store milk is rarely safe, par-

ticularly in the summer.

Much depends upon the care of the milk after it is received for use. It should be kept in a cool place—never in pitchers or pans exposed to a foul air and flies. There is nothing so important in the care of milk as cleanliness.—Bulletin Connecticut State Board of Health.

WHY NOT TRY A SPOOL?—If clothes that are slightly damp are hung on a nail or metal peg, a rust stain that is almost impossible to remove will be the result. To prevent this, drive a nail with the head removed into the wall or cleat, and place a wood peg over it. The peg may be turned up or whittled out with a pocket-knife and the hole bored with a hand drill.—International Hospital Record.

CHILD SUICIDE IN RUSSIA.—According to the statistics of child suicide in Russia for the year 1911, just published, there were 155 cases among the pupils of the schools of the Ministry of Public Instruction. There were also 59 cases of attempted suicide by boys and 32 by girls. The motives were nervous and mental illness, school troubles, family troubles, and romantic reasons.—Brit. Jour. Nursing.

Hot Stupes for Pain.—In cases of acute ileocolitis hot stupes or hot compresses to the abdomen are often most grateful to the patient, when there is abdominal pain and tenesmus. The hot applications should be changed every fifteen or twenty minutes, never being allowed to become cold.—
Therapeut. Gazette.

SANITARY OIL FLOOR DRESSING IN PUB-LIC Schools.—In order to prevent disease acquired in the school room, C. Ward Crampton, M.D., Director of Physical Training, New York Schools, advises the use of a sanitary oil floor dressing to lessen the amount of dust. He also recommends that coughing and sneezing be prevented as far as possible. This can be controlled by instructing each child to provide himself with a clean handkerchief. This should be carried conveniently so as to be available for immediate use. The children should be instructed when coughing or sneezing to guard the mouth and nose with the handkerchief so as not to spread any infectious material throughout the room. Sometimes the impulse to cough or sneeze is so sudden that this cannot be done. The child should, therefore, get in the habit, when he coughs or sneezes, of turning his head away from his neighbors, and should guard the mouth and nose with the hand, but every effort should be made to make proper use of the handkerchief.-Medical Record.

PERSONALS.

MOUNTAINSIDE HOSPITAL ALUMNAE ASSOCIATION, MONTCLAIR, N. J.

THE Eighth Annual Meeting of the Mountainside Hospital Alumnæ Association was held at the Graduate Nurses' Club, 39 S. Willow Street, on Wednesday, October 21, 1914, to elect officers for the ensuing year. The following officers were elected:

President, Miss Miller; 1st vice-president, Miss Cox; 2nd vice-president, Miss Stitt; corresponding secretary, Miss Montgomery; recording secretary, Miss Le Roy; treasurer, Miss Synnott.

Nominating Committee: — Chairman, Miss Weiss; assistants, Miss Budd, Miss Tuppett.

Auditing Committee:—Chairman, Miss Rice; assistants, Miss Hanlon; Miss Jamieson.

Visiting Committee:—Chairman, Miss Guthrie; assistants, Miss Garrett, Miss Jamieson.

Entertainment Committee:—Chairman, Miss Rice; assistants, Miss Trippett, Miss Scott, Miss Le Roy.

Printing Committee:—Chairman, Miss Speicker; assistant, Miss Bryan.

The meeting was well attended. A very nice social time was enjoyed by all at the close of the meeting.

Miss Agnes Turner, '12, and Miss Minnie Severance, '12, of the Waltham Training School, have gone to assume charge of a small hospital in Pau, France.

Bertha Miller who has been on the nursstaff at Oakes Homes, Denver, for over vears, has left for Westgate, Shanghai, , where she will take charge of a training school for Chinese women.

Miss Webber, assistant superintendent of the Rochester, N. Y., Homeopathic Hospital for over seven years, has resigned to engage in foreign Red Cross work.

Miss Elizabeth A. Greener, for several years superintendent of the Hackley Hospital, at Muskegon, Mich., has resigned to become superintendent of nurses at Mount Sinai Hospital, at New York City.

Charline Hardacre, of St. Louis, has recently returned to the United States from the Philippine Islands where she has completed a three years' course in the Government service which time she held the position as anesthetist in the Philippine General Hospital. Miss Hardacre has accepted a position in Parker Memorial Hospital of the State University, Columbia.

Dr. Grace L. Meigs, of Chicago, has been appointed by Miss Julia Lathrop, chief of the children's bureau of the U. S. Department of Labor, as expert on sanitation on the staff of that bureau. Dr. Meigs is a graduate of Rush Medical College and has done special work under Professors von Pirquet, Finkelstein and Von Bokay. She has recently been attending physician in children's diseases in Cook County Hospital, and will act in a general advisory capacity to the bureau in matters of child health and hygiene.

Helena R. Stewart, of New York City, entered upon her duties as supervising nurse on the staff of the Ohio State Eoard of Health October 5. She was certified by the civil service commission following an examination of candidates for the position held September 22. Miss Stewart is a graduate of Brown University and hat had wide experience both in public health nursing and in institutional work in Providence, Rhode Island, and New York City. She has acted as assistant superintendent of the country home for Convalescent Babies at Sea Cliff, Long Island, and had charge of the surgical department in the Infirmary for Women and Children, and in the New York Hospital, in which institution also she received her training as a nurse. Miss Stewart's work will consist of supervision of the various local public health nurses in the state who are approved by the State Board of Health, and she will assist communities desiring to inaugurate public health nursing work in securing suitable nurses. The demand for persons to do this kind of work is increasing constantly with the growing knowledge on the part of the public of the value of the visiting nurse in conserving the public health.

To the Physician, a Suggestion:

No Alum — No Dyspepsia

The Doctor always looks to the food. Patients who eat judiciously of warm breads, hot biscuit, hot cakes, made light and tasty with Royal Baking Powder, may snap their fingers at dyspepsia. It is the tasty, appetizing food that aids digestion.

There is a quality in Royal Baking Powder coming from the purity, wholesomeness and fitness of its ingredients which promotes digestion. Food raised by it will not distress. This peculiarity of Royal has been noted by hygienists and physicians, and they are accordingly earnest in its praise, especially recommending it in the preparation of food for those of delicate digestion.

ROYAL BAKING POWDER

Absolutely Pure

No Alum

Fluid Extracts and Tinctures of definite potency.

When writing a prescription for a fluid extract or tincture what assurance have you that the product dispensed will be medicinally efficient?—that it will be active, yet not too active?—that it will produce the therapeutic result that you hope for and expect?

These are important questions. You can answer them decisively if your prescription calls for a product of our manufacture.

Our fluid extracts and tinctures are adjusted to fixed and definite standards of strength, alkaloidal or otherwise. When chemical assays are not available, as with digitalis, aconite, ergot and a few other drugs, tests are made upon animals by methods yielding reliable data as to both quality and activity. Not an ounce of any fluid extract or tincture goes forth under our label that does not measure up to the adopted standard.

Why chance results with fluid extracts and tinctures of unknown or variable therapeutic worth? The specification of "P. D. & Co." on your prescriptions will insure products that are accurately standardized—products of established quality and potency.

Home Offices and Laboratories, Detroit, Michigan. Parke, Davis & Co.

When you write to advertisers, please mention The Dietetic and Hygienic Gazette

PAPINE IS A MOST SATISFACTORY ANODYNE

ECTHOL INCREASES PHAGOCYTIC POWER

IS HIGHLY EFFICIENT AS A SEDATIVE

RY IT WHEN THE USUAL EXPECTORANTS DO NOT GIVE PROMPT RELIEF. SOOTHES THE INTENSE IRRITATION AC-COMPANYING INFLAMMATION OF THE AIR PASSAGES.

BROMIDIA OF ADVANTAGE IN FEMALE NEUROSES

USE PAPINE (Battle) IN PLACE OF THE CUSTOMARY OPIATES.

BATTLE & Co., Chemists' Corporation, St. Louis, Mo.

IODIA IN THE PREVENTION OF ANGINAL ATTACKS

TABLE OF CONTENTS	
Editorials.	THE LEISURE HOUR.
Vaccination Against Smallpox 529	Dreamers and Dreamland. By Chas. W.
Compulsory Vaccination 531	Super, Ph.D 551
The Sins of the Father	A Peace Hymn. By Rabbi H. Pereira Mendes 553
A National Department of Health 532	Travelogues 554
Voluntary Sanitary Standards in Industry 533	Lest We Forget 555
Kitchen Efficiency 534	Ambidexterity 556
Original Articles.	A Prayer of the Peoples. By Percy MacKaye 557
Hygiene for Women. By Ralph Waldo, M.D. 535	Books.
The Feeding of Children Over One Year of	The Cancer Problem 558
Age. By C. W. Canan, M.D 539	Vegetable Lore 560
Historic Neglect of Rest. By Philip Getson,	NURSING DEPARTMENT.
M.D 541	To Sweep or Not to Sweep 561
The Hippocratic Oath 543	Work as a Cure 563
Public Health and the Press. By the Editor	Will Surgery Learn Anything New from the
of The Gazette 544	Present War? 564
The Autobiography of an Oyster 546	Better Than Any Antiseptic 564
RURAL SANITATION.	With the Ambulance Corps in Belgium 565
Sewage and Fertilizer 547	The Medical Profession and the Trained
England 547	Nurse. By Miss F. J. Brecht 567
Ireland 548	Mission Hospitals of the Empire 568
Scotland 548	Painful Heel 570
Germany 548	Questions and Answers.
France 549	Obstetrical Nursing 571
Austria 549	Surgical Nursing and Bacteriology 572
Russia 549	Practical Nursing and Dietetics 574 Materia Medica and Urinalysis 574
Dan's Wife 550	Technicalities
Perhaps! 550	Personals 576

Tuberculosi lioradin

DIORADIN, a radio-active preparation, has been employed with gratifying results in the leading Hospitals and Sanatoria for Tuberculosis in this country and in Europe.

Dr. Stephen W. Wells, Liberty, N. Y., in his "Report Based On 16 Cases Of Advanced Pulmonary Tuberculosis Treated By Dioradin" (Med. Rev. of Rev., June, 1912), established Dioradin's Therapeutic Efficiency as follows:

It improves the appetite and digestion.

Decreases Cough and expectoration.

Reduces temperature and strengthens the pulse.

Causes a gain in weight.

Tubercle bacilli decrease or disappear.

It is not irritating or dangerous, and is easy of administration.

R. Atkinson Stoney, M.B., F.R.C.S.I., Visiting Surgeon to the Royal City of Dublin Hospital, in his "Treatment of Surgical Tuberculosis by Doradin," read before the Section of Surgery of the Royal Academy of Medicine in Ireland, states as follows:

Taking the whole fifteen cases together, I think that the results are decidedly good, and they are certainly better than any I have ever obtained by the use of tuberculin in any of its many forms.

Dr. Joseph Brandaleone, Assistant Surgeon to the Post-Graduate Hospital, in "A New Treatment for Tuberculosis" (Denver Med. Times, May, 1912), draws the following conclusions on results obtained from Dioradin:

I would recommend this treatment for incipient stages, where I believe cures can be effected. In the second stage of the disease, cures may follow the treatment, but at least the disease can be arrested and the patient made more comfortable. In the last stage I have found that the treatment makes the patient more comfortable, and prolongs the life.

Dr. H. F. Boatman, formerly of Independence Hospital, Iowa, concludes the report of a very interesting case (So. Cal. Prac., Apr., 1912):

This is not a favorable case for any treatment, but the surprisingly happy results obtained by Dioradin lead me to conclude that in this remedy we have a most potent agent for destroying or inhibiting the growth of the tubercle bacillus.

Send for the newest reprints of articles, and analytical report stating composition.

Supplied to physicians only.

DIORADIN COMPANY, 206 Broadway, New York SOLE AGENTS UNITED STATES AND CANADA.

When you write to advertisers, please mention The Dietetic and Hygienic Gasette

MOUNTAIN VALLEY SPRING WATER

RADIO-ACTIVE

A Natural Diuretic Water from Hot Springs, Ark.

FOR

Bright's Disease, Diabetes, Cystitis, Rheumatism Gout, Dropsy and all Diseases due to Uric Acid.

MOUNTAIN VALLEY WATER COMPANY

247 W. 36th STREET, NEW YORK CITY

Phone, 6863 Greeley

When you write to advertisers, please mention The Dietetic and Hygienic Gazette

AN IMPORTANT WORK, ON AN IMPORTANT SUBJECT

THE SEXUAL INSTINCT

Its Use and Dangers as Affecting Heredity and Morals

By JAMES FOSTER SCOTT, M.D.,

C.M. (Edinburgh University,) A.B. (Yale University)

Late Obstetrician to Columbia Hospital for Women, and Lying-in Asylum, Washington, D. C.; late Vice-President of the Medical Association of the District of Columbia, etc., etc.

THIS book contains much plain talking, for which I offer no defence. Its justification will be found in the body of the work.

The future prospects of humanity rest in the sexual domain of those who are now living, and none will dispute that the degradation of mankind is due more to sexual irregularity than to any other cause.

My knowledge of these subjects has been acquired through legitimate channels; as a medical student at Edinburgh, Vienna and London; then a residence of two and a half years in a hospital devoted exclusively to obstetrics and the diseases of women, followed by several years more of hospital and private practice.—Extracts from Author's Preface.

Medical Record says:

"The matter is handled fearlessly and in a straightforward manner, which must appeal to all lovers of truth. Those who have to do with the rearing of children, whether in the capacity of parent, teacher, or physician, will find much to aid and encourage them in dealing with delicate matters relating to sexual life."

Medical Age says:

"The matter has been treated in a clean but very suggestive way. The author discusses various questions connected with the sexual life from a lofty standpoint, and urges a better understanding of the important matters with which he deals."

Second Edition, 8vo., 474 pages, Illustrated, Cloth, \$2.00

Full contents circular sent on request

THE DIETETIC AND HYGIENIC GAZETTE, 87 Nassau St., New York?

NEURASTHENIA

May be you haven't got it. But are you sure about it? Do you know its symptoms when you see them? There is hardly a man or a woman who has passed the years of early youth but is nervous in a more or less pronounced way.

Now it is only a step from the irritability of today to the frazzled nerves of tomorrow, and the time to combat neurasthenia is now, before bad nerves get a big start—and still better, before they put in their appearance at all. For

Neurasthenia Can Be Cured

It is wholly a matter of using natural, common sense methods in a wise and persistent way. And the sooner the work is begun the more complete will be the relief.

For everybody with high-strung nerves Dr. J. H. Kellogg has written for the July number of GOOD HEALTH MAGAZINE an article on—

The Symptoms and Treatment of Neurasthenia

It is not written in technical language that no one but a doctor would understand, but in every day terms that no one can fail of following. From it you will know whether you have neurasthenia or not, or whether you are going to have it, and you will know, too, how to get down to grips with the disease and fight it with means that cannot fail of success.

ORDER OF YOUR NEWSDEALER, OR SEND TEN CENTS IN STAMPS TO—THE GOOD HEALTH PUBLISHING CO. BATTLE CREEK, MICHIGAN.

When you write to advertisers, please mention The Dietetic and Hygienic Gazette

SPECIAL OFFER:—To every person using the coupon attached to this advertisement, we will send GOOD HEALTH MAGAZINE for one year, beginning with the July number, and one copy of "Constipation: Its Causes and Cure," a book by Dr. Kellogg on this universal and distressing disease. It describes the symptoms, tells the simple, homeapplied remedies for relieving it. Write today.

THE BELGIUM PHYSICIANS.

When the dreadful earthquake and holocausts occurred in San Francisco now some ten years ago, from all hands relief was sent to the afflicted city. Thus were helped almost all classes of our fellow-citizens in San Francisco, except the physicians; who toiled day and night, giving freely and without price of their mind and heart and strength, to alleviate sufferings and to heal the sick; losing, many of them, all their fortunes, and receiving practically nothing with which to restore themselves and their families to health and to living conditions -to say nothing of the comforts to which they had been accustomed. That is the way always with this, the most self-abnegating of callings. And such is surely now the case in Belgium, where all the people from their great King down to the humblest are feeling the stress of the cruelest war conditions in our history. If the Belgian physicians are to receive adequate aid, surely it had best come from their brethren this side the water. And to this end American Medicine has been instrumental in forming a committee for the collection of a Fund for Belgian Physicians; and we hope that our colleagues will be able to send contributions to the committee, in the care of American Medicine, 18 East 41st Street, New York City. All monies sent will be duly acknowledged. Or if it is preferred to send contributions to THE GA-ZETTE, these we will gladly acknowledge and forward to the committee. No matter how small the amount, if no more than twenty-five cents, should be sent as early as possible. Make checks payable to the Belgian Medical Committee, with name and address of donor.

"Brother physicians, brother editors, good friends, and every one whose heart beats in sympathy for Belgium's sorrow-laden but noble, uncomplaining and hard working doctors, help us to save them from hunger, cold and destitution!"

EXIT THE BATH TUB.

A FEW months since, we presented cogent arguments against any sort of bathing. Our informant affirmed that man is an "air animal" and needs no water on his air-seasoned hide to enhance his beauty or his health. He denounced the bath-tub as not only superfluous but a nuisance in the house.

Out of New Jersey comes a new prophet who proclaims the ukase that we may bathe, in fact it were better that we should bathe,—but not in the tub. His revelation comes to us by way of *The News*, of Lynchburg, Virginia. Listen!

THE BATHTUB MUST GO.

You never can put your finger on anything in this changing old world. New ideas continually come in, replacing the old. No sooner does the world get settled on something as eminently right, wise and proper than somebody comes along and knocks all the props from under our comfortable beliefs. Take, for example, the bathtub. Of course, in early childhood we all regarded the tub as an instrument of torture; but have, with matured years, come to look upon it as a symbol of civilization, as the chosen path to that virtue which is next to Godliness. But not so. It is in reality a relic of barbarism, and use of it a sure sign of insanity. For this we have the word of Dr. Henry Allers, of Harrison, N. J.

Speaking before the board of health of that community on Thursday night, Dr. Allers said: "When you bathe in a bathtub you simply rub off the dirt into the water; then you revel joyously in the contaminated fluid, and think you're clean. The habit is unspeakable. The bathtub

should be eliminated as a relic of barbarism. The only way to get really clean is the Turkish bath or the shower. If neither of these methods be at your disposal, then by all means get yourself dry cleaned: anything but the bathtuh."

at your disposal, then by all means get yourself dry cleaned; anything but the bathtub."
We all hate to see the bathtub go; it is an old
friend; but even in our bereavement let us look
upon the bright side—with the bathtub eliminated
there will be no more government suits against
the bathtub trust.

More frenzied physiology, of the which we have had plenty already, thank you. It reminds us of the famous man "in our town" who scratched out both his eyes and immediately proceeded to scratch them in again. If Dr. A. will "rub off" in a tub of water and then "revel joyously" until he rubs it on again, we wouldn't mind taking a trip down to New Jersey to see him do it. Until we see some such demonstration of his theory we will continue with our occasional tubbing in the good old way, and recommend it to others—especially to the "great unwashed."

By the by, what's the matter with a good rinsing in the tub after the major part of the bath is finished, as our mothers taught us to do? Turkish baths are rather dear for many good and clean people, and we would hate to see the populace all waiting until they can get their landlord to establish showers in their apartments.

Think of the poor fishes who have to wash in the same water all their lives!





used as a mose and throat wash reduces the possibility of largugeal and bronchial infections.

**MITMATION CHEMICAL CO., SK. LOUIS, MA. KATHARMM represents in continuous Againsts Gradensis, Taymus Volgaris, Hestha Arvensis, Paptalecca Becandra, 102 grains Acid Bernsaligific, 24 grains Salian Tyrahamts to each fluid once of Part Buttlied Extract of Witch Flags!.

A SUCCESSFUL INFANT FOOD MUST BE NEITHER TOO WEAK FOR PERFECT NUTRITION, NOR TOO HEAVY FOR COMPLETE DIGESTION.





is a safe, satisfying and wholesome food, which in the most stubborn case is easily and completely assimilated.

Samples and Feeding Charts, printed in any language desired, sent upon request.

Borden's Condensed Milk Co.
"Leaders of Quality"
Est. 1857 New York

A DOCTOR'S VIEWPOINT

BY

John Bessner Huber, A. M., M. D.

Dr. John B. Huber, the author of this book, is the Editor of The Dietetic and Hygienic Gazette, a Fellow of the American Medical Association, a Fellow of the New York Academy of Medicine, a member of various societies, a popular lecturer and a writer who has discussed vital subjects in a genial, interesting, easily comprehended and convincing way, in such journals as Harper's, Collier's, The Review of Reviews, The New York Evening Post, Lippincott's, Outdoor Life and Recreation, Country Life in America, Knowledge, Scientific American, etc., etc.

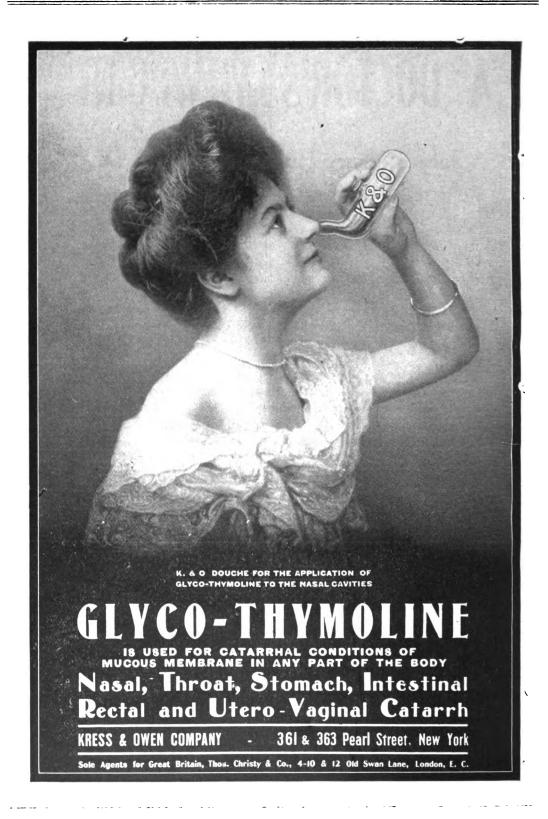
The spirit of the present work is indicated in the prefatory note:

"A short preface; since nobody ever reads a long one. Much of our interest in life lies in how we appreciate one another's ways of looking at it—the way of the counsellor, the sky-pilot, the painter, the farmer, the policeman on the fixed post, the steeplejack, the man on the street, the woman in the wrapper. If this book gets carried about in the coat pocket and secures place under the evening lamp and beside the armchair it will be because it has been written from a doctor's viewpoint of our human relations and of our civilization."

Every page of the book will indeed be found to be English literature in the highest and best sense of the term.

ORDER BLANK

The Gazette Publishing Company,
87 Nassau Street, New York,
Enclosed findfor which
please send mecopies of
A DOCTOR'S VIEWPOINT
by
John Bessner Huber, A.M., M.D.
Name
Address
Price \$1.00, Postage Prepaid.



BUILD
UP
To
BRACE
UP
To
TONE
UP

Supplied in 11-ounce bottles only—never in bulk.

Samples and literature sent upon request.

Prescribe original bottle to avoid substitution.

In ANY form of DEVITALIZATION prescribe

Pepto-Mangan (Gude)

Especially useful in

ANEMIA of All Varieties:

CHLOROSIS: AMENORRHEA: BRIGHT'S DISEASE: CHOREA:

TUBERCULOSIS: RICKETS: RHEUMATISM: MALARIA:

MALNUTRITION: CONVALESCENCE: As a GENERAL SYSTEMIC TONIC After LA GRIPPE, TYPHOID, Etc.

DOSE: One tablespoonful after each meal. Children in proportion.

> M. J. BREITENBACH COMPANY New York, U. S. A.

Our Bacteriological Wall Chart or our Differential Diagnosis Chart will be sent to any Physician upon request.

To Stimulate The Liver Without Catharsis!

CHIONIA

Acting specifically on the liver this efficient remedy will be found invaluable in jaundice, indigestion, constipation and hepatic torpor generally. : :

DIRECTIONS—One to two teaspoonfuls in water, three times a day.

PEACOCK CHEMICAL CO., St. Louis, Mo.





A TONIC OF BROAD APPLICATION.

NO CONTRAINDICATION OF AGE OR SEASON.

GRAY'S GLYCERINE TONIC COMP.

STIMULATES THE APPETITE AIDS DIGESTION INCREASES ASSIMILATION PROMOTES THE NUTRITION. INDICATED IN ALL
DISEASES DUE TO
FUNCTIONAL DERANGEMENT
OR NUTRITIONAL DECLINE.

THE PURDUE FREDERICK CO. 135 CHRISTOPHER ST. NEW YORK.

Doctor, you need a MODERN UP-TO-DATE CARD SYSTEM

to lessen your work in keeping your Accounts and History Records up to the minute

GET AN

"Ever Ready File"



Over 3,000 Physicians Using Same

Not a large cumbersome desk affair. Compact in a neat file, always at hand, ready for reference. Write to-day for particulars. Twelve different cards to select from.

Price From \$3 te \$10 Complete

Ever Ready Mfg. Co. 1401-1407 PLUM STREET

Cincinnati - - - Ohio

"The Sanitary Home"

Free to Nurses

Our new pamphlet "The Sanitary Home" contains many valuable hints for the nurse regarding necessary precautions in sickness and for the home.

We will mail free upon request:

A copy of "The Sanitary Home." A valuable "Bedside Record Pad." A sample bottle of Platt's Chlorides.

PLATT'S CHLORIDES has been recommended by the medical profession and used in homes and hospitals for over a quarter of a century.

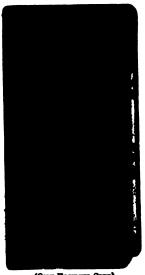
Safe, Strong and Economical.

Platt's Chlorides

The Odorless Disinfectant

Two sizes, 25 and 50 cents

Write name and address plainty on your request HENRY B. PLATT, 55 Cliff Street, N. Y.



(ONE-FOURTH SIZE)

You Need It

WHETHER you are a doctor, nurse, student, or layman, you need a handy speller and definer that is accurate, complete, and concise—a dictionary that you can refer to at a moment's notice for medical terms, and be able to depend upon for exact definitions.

Great care has been taken to make this combined English and Medical Dictionary complete and up-to-date, yet compact enough to be carried in the pocket.

It Is Made for Service

It is printed on thin durable paper and bound in flexible leather, so that it will stand all kinds of bard usage.

How often do you want to look up a word when no large dictionary is near—the word slips your memory and its exact meaning is lost to you?

If you wish to read or write with intelligence, this little book is indispensable.

The price is Fifty Cents, postpaid, or FREE with a NEW subscription to

THE DIETETIC AND HYGIENIC GAZETTE

87 NASSAU STREET

NEW YORK

FORMAMINT-TABLETS

(Dissolved in the Mouth)

Make Mouth and Throat Disinfection easy and pleasant

BACTERICIDAL: PROPHYLACTIC:

Professor O. Chiari, Director of the Imperial University Clinic, Vienna, states:

*FORMAMINT has been used in a great many cases in my clinic and dispensary practice for the acute infectious diseases of the cavity of the mouth and pharynx, and with the best of results. It has especially been used as a prophylactic for the disinfection of the mouth during the administration of mercury in the treatment of syphilis."

Full clinical and bacteriological data and generous samples upon request to A. WULFING & COMPANY, 80 Irving Place, New York City,

The Dietetic and Hygienic Gazette

GAZETTE PUBLISHING CO., Publishers



A Monthly Journal of Achievement rather than of discussion; disseminating right principles of dietetics, physical and mental hygiene, domestic and public sanitation, disease-prevention; devoted to the promotion of human health, efficiency and longevity.

INTERESTING AND VITAL TO PHYSICIAN, NURSE AND LAYMAN ALIKE

87 NASSAU ST., NEW YORK

SUBSCRIPTION, \$1.00

FOREIGN SUBSCRIPTION, \$1.50

SINGLE COPY, 15c.

Subscriptions may begin at any time

Volume ends with issue of December

ORIGINAL ARTICLES—Articles are accepted for publication with the understanding that they are contributed solely to this Journal.

ILLUSTRATIONS, such as half-tones and zinc etchings, as in the judgment of the editors are necessary to illustrate articles, will be furnished when photographs or drawings are supplied by the author.

MANUSCRIPTS will be returned, if stamps are sent for the purpose.

ADVERTISEMENTS—First advertising form closes on the 15th of the month; last advertising form closes on the 20th for the issue of the following month. Time

should be allowed for composition of advertisements and for the sending and return of proofs. Advertising rates will be sent on application.

CHANGE OF ADDRESS—In requesting a change of address, it is important that both the old and new addresses be given.

DISCONTINUANCES—In order that there may be no interruption in your files, remittances should reach us within thirty days of receipt of bill.

REMITTANCES may be made by check, draft, registered letter, money or express order, or currency.

INDEX TO ADVERTISERS.

Battle & Coiii	Lambert Pharmacal Co2d cover
Blakiston's Son & Co., Pxix	Liederbach Co., Thexxv
Borden's Condensed Milk Coviii	Morgan, T. C., & Coxxiii
Breitenbach Co., M. Jxi	Mountain Valley Water Co
Bristol-Meyers Coxxv and xxvii	Od Chemical Coxxv
Brush, E. F., M.D4th cover	Parke, Davis & Coii
Chinosol Co2d cover	Pattee, A. E3d cover
Coward, James Sxv	Peacock Chemical Coxi
Dad Chemical Coxxviii	Platt, Henry Bxii
Denver Chemical Mfg. Coxxi	Postum Cereal Coxvii
Dioradin Coiv	Purdue Frederick Co., Thexii
Etna Chemical Co., Thexv	Pure Gluten Food Coxv and 3d cover
Ever Ready Mfg. Coxii	Romeike, Henryxxvi
Farwell & Rhinesxxv	Royal Baking Powder
Fellows' Syrup4th cover	Sherman, G. H., M.Dxxiv
Fougera & Coxi	Smith Co., Martin Hxxvi and 3d cover
Great Bear Spring Waterxxv	Sultan Drug Coxxvi
Good Health Publishing Covi	The Tilden Coxxviii
Katharmon Chemical Coviii	Vapo-Cresolene Co., Thexxvii
Kress & Owen Cox	Wulfing & Coxiii

COSTS MOST PER POUND but has what people want — QUALITY

Perhaps the one food you have never tried

HOYT'S GUM GLUTEN BREAKFAST FOOD

Extracted from wheat—the protein—the nutty flavor—the part of flour that builds the nerves—makes one feel good.

A pound package mailed on receipt of 25c.

For sale only by the leading grocers.

THE

PURE CLUTEN FOOD CO.

90 West Broadway New York City

PAIN

--- however severe or wherever located --- can be quickly and satisfactorily controlled by

PHENALGIN

Prompt and efficient in action, this dependable analgesic not only affords the anodyne effect desired, but without deranging digestion, locking up the secretions, producing constipation, or inducing a drug habit.

Thus it is that Phenalgin has supplanted optum and its derivatives for the relief of Headache, Rheumatism, Gout, La Grippe, Lumbago, Neuralgia, Disorders of the Female and painful conditions generally.



To countless physicians Phenalgin is "the one dependable analgesic-the logical supplanter of opium."

Specify "Phenalgin Pink Top Capsules."

Samples and interesting information on request,

THE ETNA CHEMICAL CO.

59 Bank Street New York



Coward Store for attention.

Coward Shoe

In Treating Weak Arches

and ankles, either in the incipient or advanced stages, careful physicians understand the importance of employing corrective mechanical assistance.

COWARD SUPPORT SHOES

WITH COWARD EXTENSION HEELS

are of immediate benefit in all cases of structural foot weakness, including "turned" ankles, weak ligaments, falling arch and flat-foot.

Constructed on approved anatomical principles, these remedial shoes provide the needed support, without discomfort to the wearer, or interference with the muscular action of the feet.

The helpful, upward pressure of the Coward Arch

Support, rests strained ligaments, relieves the pain, and in many cases effects a speedy recovery.

Coward Arch Support Shoes are of special assistance in treating arch and ankle weakness of growing feet, and are as efficacious in preventing the foot troubles of childhood as in their treatment and correction.

Coward Arch Support Shoe and Coward Extension Heel have been made by James S. Coward, in his Custom Department, for over 33 years.

MAIL ORDERS FILLED WRITE FOR CATALOG JAMES S. COWARD 284-274 Greenwich St. NEW YORK
Mail Orders Filled SOLD NOWHERE ELSE Send for Catalog

NEW YORK TREATISE on "FLAT-POOT"
Send for Catalog MAILED UPON REQUEST

Same foot after be-

ing fitted in a Coward

Arch Support Shoe;

ankle kept upright, arch held in place—weight of

body equally distributed.

FEEDING OF BREAST-FED INFANTS.

THERE is a tendency in the present day, in both Austria and Germany, to lessen the number of feedings, and to allow five instead of eight meals after the first fortnight.

According to Czerny, the children get as much during the day, but more at a time, and thrive as well. It was found, however, in a Dresden clinic that there are many exceptions to this, and there is no doubt that each child is law unto itself.

On the other hand, the example of the lower animals goes a long way to prove that little and often is the approved method, and many writers advocate that for three months the child should be fed whenever it wakes and appears hungry, but about two ounces every two hours is a fair average. It is often forgotten that babies have an enormous amount of growing to do, and, their stomach capacity being limited, it must be replenished much oftener than is necessary later on. If a child has a good digestion, its appetite is keen, and it is ready for its food oftener. The quality of its meals also makes a great difference—a weak, much diluted milk mixture does not supply the ingredients to last as long as a good meal of mother's milk.—Nursing Times.

POISONING BY SANTONINE.

Santonine is one of the drugs with which the laity take too many liberties. No diagnosis is more commonly made off-hand by the uneducated than that of "worms." Almost any one can tell when a child has worms—can at least guess at it. Doctors are often criticised for not agreeing at once with these home-made diagnoses. Many a long suffering child has been dosed with santonine purely on the authority of some wise member of the family, and every doctor knows that much unnecessary suffering has been entailed by this recklessness. It is

a good thing to remember that in all doubtful cases it is better to give no remedy than to take the chance of needless medication. The following case, from the *Journal de Médicine de Paris* is a warning to the home prescriber:

Santonine Poisoning in Infants.—A. Chassevant points out that santonine is not a safe vermifuge in the infant, at any rate, under two years of age. He reports the case of a child who had received two centigrams of santonine in the evening and the following morning a dose of castor oil. Following this medication the child developed convulsions, fever, and somnolence, which symptoms lasted for several days.

GOATS.

SWITZERLAND and Bavaria are heavy producers of goats. On only 15,000 square miles of land Switzerland produces \$8,000,000 worth of goats annually. The goats produce much milk which is first soured and called Yoghurt. To this article of food is attributed the long, virtuous and efficient life of the peasantry. The countries named have eight times as many centenarians as supposedly better countries where meats and rich foods are consumed in great quantities. These countries also

have fewer insane, fewer public dependents and fewer orphans and criminals. We have millions of acres of mountains and fine brush land, and could produce millions of goats. With babies in our cities and country too (the baby death rate is almost as high in our rural as in our urban districts) sickening and dying for want of proper food, we could, if we would, start the milk goat industry and enjoy its pecuniary and health producing results.—Bulletin Indiana State Board of Health.

A Handicap To School Work

often overlooked, is the use of the stimulant beverages—tea and coffee.

Children, being of impressionable nature, are easily influenced by the caffein in tea and coffee, and are apt to become confirmed in the habit.

Investigation has proven that the use of tea and coffee, resulting in chronic indigestion, malnutrition, anemia and nervousness, is a hindrance to the physical and mental development of thousands of school children.

What is the natural conclusion?

If you are to conserve the health of the new generation, you must preach the gospel of anti-caffeinism among the families of your practice.

The pure cereal food-drink

POSTUM

resembles coffee in appearance and taste, but is devoid of caffein or any other drug or harmful substance.

Postum is made only of choicest wheat skilfully roasted, with a small proportion of wholesome molasses—a delicious table beverage—safe for both children and grown-ups.

Postum comes in two forms: Regular Postum must be well boiled. Instant Postum requires no boiling—made in the cup with hot water—instantly.

"There's a Reason" For POSTUM

The Clinical Record for Physicians' bedside use, together with samples of Instant Postum, Grape-Nuts and Post Toasties for personal and clinical examination, will be sent on request to any physician who has not yet received them.

Postum Cereal Co., Ltd., Battle Creek, Mich., U. S. A.

RATS AND PUBLIC HEALTH.

THE most serious charge against rats grows out of their relation to human health. It is now positively known that rats are chiefly responsible for the Bubonic Plague, a disease, which in spite of all efforts to combat it, has within the past dozen years caused more than five million deaths in India alone. Bubonic Plague is primarily a disease of the rat. It is communicated from the plague-stricken rat to other rats and from rats to men by means of fleas with which the rats are infested. When a rat is dead of plague, the fleas abandon the dead rat and go in search of living beings who still have warm blood circulating in their veins. In biting man the fleas inoculate him with the virus from the rat dead of the plague and thus transmit the disease to man. The identity of plague in man with plague in the rat was proven some years ago, but the particular means by which the disease is transmitted from rat to rat and from rat to man was not clearly understood until within recent years. The India Plague Commission after two years of exhaustive research, has summarized the results of its study in the following conclusions:

- 1. Bubonic Plague in man is entirely dependent on the disease in the rat.
- 2. The infection is conveyed from rat to rat and from rat to man solely by means of the rat flea.
- 3. A case of Bubonic Plague in man is not itself infectious.
- 4. A large majority of plague cases occur singly in houses. When more than one case occurs in a house the attacks are generally simultaneous. (This proves there is no soil infection.)
- 5. Plague is usually conveyed from place to place by rat fleas, which are carried by people on their persons or in their baggage. The human agent (the carrier) not infrequently himself escapes infection.
- 6. Insanitary conditions have no relation to the occurrence of plague except in so far as they favor infestation by rats.
- 7. The known epidemic season is approached usually by acute plague in the rat, accompanied by a few cases in human beings.

Bubonic Plague made its appearance in the United States at San Francisco in 1907. Up to February, 1908, 77 deaths from plague occurred. Traps, poison, bounties and every possible means were employed to destroy the rats in the city. Up to May, 1908, 278,000 rats were captured and it was estimated that fully one-half a million had been poisoned. From May, 1908, to June 1, 1909, 116,000 rats were trapped and 10,000 were found dead. As a matter of course the number of dead rats discovered was a small per cent. of the total number killed by poison. The last rat found infected with plague bacillus was taken October 23, 1908, but no cases of plague in the human have occurred in San Francisco since January, 1908.

Rats disseminate diseases other than Trichinosis in hogs is Bubonic Plague. probably perpetuated by rats, since trichinæ in the hog can result only from its eating the flesh of animals infested with the trichinæ parasite. The only two domestic animals known to be subject to this parasite are the rat and the hog itself. Pork becomes infected, then, only when hogs eat the flesh either of infested rats or infested hogs. Slaughter houses where rats are abundant and where hogs are fed on uncooked offal are the chief sources of trichinous pork. Rats are probably disseminators of every kind of infection which can be conveyed into and through drains, since drains and sewers are the natural highways of the rat. Typhoid, tuberculosis, diphtheria and other malignant infections are in this way probably carried to places where they threaten human Ptomaines are undoubtedly conhealth. veyed to meats and other human foods in this way.

Rats are dangerous. The present outbreak of plague in New Orleans is due to rats, and the efforts of the city government, the state of Louisiana and the U. S. Public Health Service combined are being directed to eliminate rats from the city. The only way to avoid plague in the United States is to exterminate the rat. They can be destroyed only by making an universal war against them with traps, poison, starvation, by organized rat hunts and by building them out. As a result of the outbreak of plague in San Francisco, rat proof construction has been enforced until both rats and plague have been entirely "built out" of the Chinatown section of the city. The people of the United States must adopt the slogan, "Destroy the Rats."-Monthly Bulletin, Indiana State Board of

Food in Health and Disease

2nd EDITION

By NATHAN S. DAVIS, JR., A.M., M.D., Professor of the Principles and Practice of Medicine in Northwestern University Medical School; Physician to St. Luke's Hospital, Mercy Hospital, and Wesley Hospital, Chicago. Thoroughly revised and rewritten, containing much new material. Octavo; 449 pages. Cloth, \$3.50. Postpaid.

Part of this book reviews the underlying principles concerning the nutritive and other qualities of different kinds of foods; discusses briefly their relation to the digestive organs and traces the changes that food must undergo before it can be appropriated to the needs of the human system. This is followed by detailed consideration of the proper diet indicated for the various conditions of health and disease, each condition being taken up seriatim with concise, plain directions, and diet lists.

Source, Chemistry and Use of Food Products

By E. H. S. Bailey, Ph.D., Professor of Chemistry and Director, Chemical Laboratories, University of Kansas. 74 Illustrations. 12mo. 500 pages. Cloth, \$1.60. Postpaid.

Brings together in one volume of convenient size the more important facts in regard to that which we eat and drink. Many of these facts are distributed through a multitude of books, pamphlets and scientific reports, which are not readily accessible to the general public.

The general principles of food production, manufacture and preparation are treated in such a way that the reader may have a practical knowledge as to what constitutes a good food, and where it is obtained.-From the Preface.

OOKS

O N

a n d Treatment of

Including methods of local treatment of the stomach and intestines, mechanical treatment, hydrotherapy and psychocal treatment, hydrotherapy and psychotherapy in gastro-intestinal diseases, drug therapy as specially applied to the alimentary tract, and general consideration of the diet. By George M. Niles, M.D., Professor of Gastro-Enterology and Clinical Medicine, Atlanta Medical College, Atlanta, Ga. 87 Illustrations including 1 Colored Plate. Over 600 pages. Octavo. Cloth. \$5.00. Postpaid Postpaid.

Digestive Diseases

Note! There was a decided need for this book by all practitioners and specialists as well. It is a compact and succinct account of diagnostic methods and exhaustive discussion of both general and special therapy as applied to digestive diseases.

AND

IGESTI

ISEASES

Foods and Their | Diagnosis Adulteration

2nd EDITION

The Origin, Manufacture and Composition of Food Products. Description of and Simple Tests for Common Adulterations, Food Standards; Infants' and Invalids' Foods. By HARVEY W. WILEY, M.D., Sc.D.; Formerly Chief Chemist, U. S. Department of Agriculture; Washington, D. C. 11 Colored Plates and 87 other Illustrations. Octavo; 641 pages. Cloth, \$4.00. Postpaid.

This edition contains 100 pages of new material.

The new Food and Drugs, Act and the present widespread interest in the subject of pure food renders this a particularly timely publication. It will prove of distinct value to the physician, sanitarian, chemist, public health official, lawyer, consumer, and manufacturer.

P. BLAKISTON'S SON & CO. **PUBLISHERS**

1012 WALNUT STREET

PHILADELPHIA

Classified Directory

OF ADVERTISING

Antiseptics

Campho-Phenique (Liquid)

is an efficient antiseptic used in surgery. Campho-Phenique (powder) is a superior dry dressing for cuts, burns, ulcers and all superficial wounds.

Chinosol

The claims for this agent cover the strongest points in scientific literature and embrace the most sought-for features of the best antiseptic — non-poisonous; non-irritating; does not coagulate albumin; does no injury to membranes or newly-forming tissues.

Dioxogen

Wherever there is decay, putrefaction, decomposition, bacterial infection or odors arising therefrom, Dioxogen, the prophylactic cleanser, has a definite field of usefulness.

Listerine

Most forms of bacteria develop best in neutral or slightly alkaline media; hence, the slightly stimulating effect of the feeble boracic acid acidity of Listerine is of the highest importance in maintaining a health equilibrium of the fluids of the oral cavity.

Foods

Bovinine

is rich in assimilable organic iron and is sterile. It is ready for immediate assimilation, does not disturb, but gives the gastro intestinal tract fuel and complete rest.

Borden's Condensed Milk

Made with scrupulous care for those who demand the best for infant feeding. Dairies supplying milk for Eagle Brand are carefully selected and regularly inspected and all cows are under constant veterinary supervision.

Colden's Liquid Beef Tonic

is an efficacious combination of appetitive and digestive stimulants that is indicated in feebleness of old age, convalescence, loss of appetite and all cases of indigestion, in which the digestive secretions are subnormal.

Hoyt's Gum Gluten

is the National Pure Food Law Standard for Gluten. It is even richer in protein than required by law.

Jirch Diabetic Foods

Diabetes is no longer an incurable malady. The Jirch Diabetic Foods build up tissues and repair the waste,

Phillips' Digestible Cocoa

is a nutritious beverage, with that delicate, rich chocolate flavor that is so gratefully received by the stomach. Digestible Cocoa should largely take the place of tea and coffee at the table, with much benefit to the users.

Postum

is made from clean, hard wheat, including the bran-coat, and a small proportion of pure molasses. It does not cause the nervousness usually accompanying the use of coffee, nor the constipation following the use of tea.

Sanatogen

This new compound has made remarkably rapid strides in gaining professional confidence and favor, not only because of its inherent therapeutic value but also due to its remarkable adaptability in a most prevalent disorder of metabolism—neurasthenia.

Scott's Emulsion

Prof. Frankland, London, has proved that cod-liver oil exceeds all other foodstuffs as a generator of energy. In Scott's Emulsion the highest grade of cod-liver oil is combined with hypophosphates of lime and soda and glycerine.

Welch's Grape Juice

has attained its popular and professional favor through merit alone. This product has been perfected and marketed under the personal direction of the physician whose name it bears and whose purpose from the beginning was to produce a liquid food possessing all the nutrient essentials necessary to metabolism in sickness and convalescence.

Footwear

The Coward Shoe

Prevents and corrects weakness of ankles and arches through the natural and scientific support afforded, either in incipient or advanced stages. Thirty years' experience. Made in all sizes and widths, insuring a perfect fit for every foot.

received

been

not

has

one

#

"Pneumonia" Booklet,

our

for

A careful canvass shows that 75% of the Medical Profession use



in their regular treatment of PNEUMONIA

Old-time Doctors renew allegiance to the original— Antiphlogistine; while the Younger Generation, following their example, avoid disappointment "through risky experimentation."

"I have given it up, before now, and used other preparations, but have always come back to Antiphlogistine, and will stick this time."

......M. D. Penna.

"How a doctor can treat Pneumonia without Antiphlogistine, is beyond me. I should feel like I was flirting with an already too fatal disease."

..... M. D. New Jersey

"Have had a run on Pneumonia this spring. Used Antiphlogistine in every case. All recovered."

"My father had Pneumonia last Winter, and if it had not been for Antiphlogistine, I don't think he would be living to-day. Oh, I'm strong for Antiphlogistine in chest and throat inflammation.

M. D. Michigan

"I wouldn't care if I were the only physician in the city using Antiphlogistine for Pneumonia—especially in children—for it saves many a child's life."

.. M. D. New York

Antiphlogistine is prescribed by Physicians and supplied by Druggists all over the world

"There's only ONE Antiphlogistine"

THE DENVER CHEMICAL MFG. CO., NEW YORK

Instruments

"Harvard" Clinicals

Are standardized on permanency, accuracy, reliability and dependability. "You depend on your clinical thermometer to answer questions of human life and suffering."

Co-Active Magnetic Wave Currents

At the Laboratory of Emile Bachelet Co., Inc., 246 Fulton Street, Brooklyn, may be seen the 1911 model Electro-Therapeutic Apparatus, having four co-acting magnetic wave generators, acting simultaneously, producing no flashing of sparks or atmospheric ignition and no suppression of normal secretions.

"Tycos" Fever Thermometers

Are invariably accurate, and therefore dependable. They are the product of 60 years' experience in the manufacture of thermometers. "Tycos" thermometers are scaled after two years' seasoning, thus eliminating contraction, the main cause of inaccuracy in green glass instruments.

Sanitariums

The Glen Springs

Is the only place in America using a natural brine for the Nauheim baths. It is open all the year, and has the most complete equipment in hydrotherapy, mechanical and electrical appliances, under skilled medical direction. Illustrated literature is sent on application to the Springs at Watkins, New York.

The Mizer Sanatorium

of Coshocton, Ohio, invites members of the profession to submit their cases of drug and liquor additions on the simple evidence of "making good." The mode of treatment is open to practitioners and the approbation already gained for prompt and permanent results is evidence of its scientific procedure. Patients are allowed their freedom during the course of the treatment and invariably express their deep sense of gratitude for restoration on returning to their homes.

The Mudlavia Bath, Kramer, Ind.

offers special advantages peculiar to this institution. Physicians throughout the country express their unqualified satisfaction of the efficacy of this treatment, conducted under strictly ethical relations, by a staff of trained physicians. Physicians themselves find this a magnificent retreat for respite from professional toil. The mudlavia baths, the salubrious climate, the cheerful surroundings, the unfailing courtesy of the management afford ideal conditions.

Therapeutics

Antiphlogistine

Inflammation or congestion in any part of the body calls for Antiphlogistine. If asked whether Antiphlogistine will benefit such on such a condition, ask yourself whether inflammation is present or imminent.

Neurilla

For Nerve Disorders. If patient suffers from the "Blues" (nerve exhaustion), Nervous Insomnia, Nervous Headache, Irritability or General Nervousness, give four times a day one teaspoonful Neurilla. In nervous fretfulness of teething children give five to twenty drops.

Dioradin

A radioactive preparation, is scoring marked successes in Europe and America in the treatment of medical and surgical cases of tuberculosis. Dioradin is endorsed by clinicians of the most eminent type at home and abroad.

Ergoapiol (Smith)

The Anodyne and tonic effect which Ergoapiol (Smith) invariably has upon the female organs of regeneration, render its employment of supreme importance in all disorders of the menstrual function attended by pain.

Glyco-Thymoline

An alkaline mouth wash of the nature of Glyco-Thymoline is admirably adapted to the dry parched condition of the membrane of the oral cavity when the temperature keeps a point or two above normal for a few hours.

Gray's Glycerine Tonic Comp.

The functional depression characteristic of the melancholic state is rapidly corrected by Gray's Glycerine Tonic Comp. Not only are the digestion and assimilation improved, but the nervous and mental morbidity which usually supply the most intractable symptoms are gradually but surely overcome.

Hagee's Cordial

meets "the prime need in tissue famine," and is readily assimilated by the starving tissues thereby imparting "the resisting force required to combat those diseases to which weakened tissues fall a prey."

Sanmetto

For Genito-Urinary Diseases. A Vitalizing Tonic to the Reproductive System. Specially Valuable in Prostatic Troubles of Old Mea. Irritable Bladder, Cystitis-Urethritis, Presenility. Soothing, Relieving, Restoring.





AFFORDS PROMPT RELIEF IN ALL CATARRHAL DISEASES REACHED BY LOCAL APPLICATION.

PHARYNGITIS, LARYNGITIS, HAY FEVER, ACUTE CORYZA, RHINITIS, OZENA and INFLAMED MUCOUS MEMBRANE IN ALL PARTS OF THE BODY.

Laryngologists find SABALOL SPRAY invaluable in the treatment of the throats of actors, singers and speakers.

IF UNACQUAINTED SEND FOR SAMPLE

T. C. MORGAN & CO., 102 John St., New York

Classified Directory of Advertising

Therapeutics___Continued

Peacock's Bromides

If any preparation has stood on merit, Peacock's Bromides is that preparation. It has stood the test of time where its many cheap imitations have fallen by the wayside. Purity and definite bromide results are its chief recommendations.

Phenalgin

When the gastro-intestinals are well marked but variable; the velvety tongue, disagreeable odor of the breath, capricious appetite, attacks of nausea, retching and vomiting, sense of fullness, of flatulency, gaseous eructations and peristaltic unrest, here Phenalgin is indicated and satisfactorily relieves.

Prunoids

"An Ideal Purgative Minus Cathartic Iniquities." This valuable agent has been long and favorably known in the therapy of intestinal constipation. With equal reliance thousands of physicians have for years prescribed Seng as a digestant and Cactina Pillets as a cardiac nutrient, by the same originators.

Abbott's Saline Laxative

Pleasant to taste, promptly efficient, does not cause nausea, and never gripes. Retail price 50 cents. Obtainable at most pharmacies.

Abbott's Salithia

The same as Abbott's Saline Laxative with Lithium Carbonate and Colchicine added. Peculiarly efficient in the treatment of rheumatic conditions. Price 50 cents. Obtainable at most pharmacies.

Resinol Ointment

is a valuable remedy in the treatment of pruritus and hemorrhoids. It is also excellent in eczema and other skin eruptions. When applied it produces a feeling of comfort and ease.

Sal Hepatica

as a liver stimulant and chalogogue has become one of the most extensively used agents in general practice. In torpidity of the bowels or intestinal sluggishness it is invaluable.

Syr. Hypophos. Comp. (Fellows)

It has been noted that those patients with pneumonia who have systematically taken Fellows' Hypophosphites are less likely to meet with cardiac weakness or failure which so commonly occurs at the crises of this disease.

Wheeler's Tissue Phosphates

In Emphasising the Delicious Flavor and handsome appearance of Wheeler's Tissue Phosphates, the proprietors draw attention to the importance of these qualities in treating chronic cases.

Carbenzol Soap

An efficient medicated soap for skin irritations, chapped hands, and dandruff. Sample sent on request.

NATIVE NURSES DOING PUBLIC HEALTH WORK IN THE PHILIPPINES

A CORRESPONDENT of the Medical Record tells of the great value of the Filipina nurses in the sanitary education of their people.

There has been a gradual extension in the employment of graduate Filipina nurses to assist provincial health officers in the discharge of their duties. The results, for instance, in the province of Cebu has been very satisfactory and the nurses have been of great assistance in disseminating useful information. They have been of great assistance in the management of a "Gota de Leche" depot for the distribution of safe

milk; in giving public lectures and practical demonstrations in the homes of the people of how bacillary dysentery may be avoided; in settlement work, etc. A provincial nurse is on duty in Samar and arrangements have been about completed for the employment of similar nurses in the provinces of Albay, Ambos, Camarines, and Bulacan. Within the next few weeks it is proposed to detail nurses to health stations in the city of Manila in order that they may give practical demonstrations in the homes of the people with regard to infant hygiene and other sanitary matters.

A HOSPITAL AND A BULL-FIGHT.

We have had the opportunity of recording in these columns on various occasions both numerous and strange "by-ways" of raising money for institutional work, and a correspondent now informs us, on good authority, that recently at Teneriffe a bull-fight was organized and carried through for the financial benefit of the local hospital.—

Hospital.

LINGUAL GYMNASTICS.

At a meeting of the Laryngological Section of the Royal Society of Medicine a woman was shown who possesses the power to pass her tongue behind her soft palate, and can thus identify for herself the ends of the Eustachian tubes and the inferior turbinals. One of the surgeons present recalled a case of atrophic rhinitis, in which the patient had learnt to get rid of the crusts by means of the tongue; and two or three others alluded to the possibility of com-

mitting suicide by this means. It appears that slaves on the slave-ships were known to practice this lingual method of self-suffocation in order to obtain release from their wretchedness.—Hospital.

AN ALLY WORTHY OF CONFIDENCE.

It is going on toward 20 years since Gray's Glycerine Tonic Comp. was first placed at the service of the medical profession. During all this period Gray's Glycerine Tonic Comp. has maintained the standards that first attracted attention and the busy practitioner has ever found it an ally worthy of confidence. It never disappoints and in the treatment of atonic conditions, particularly of the gastro-intestinal tract, it is often the one remedy that will produce tangible and satisfactory results. The physician who does not use it in his practice is denying his patient many benefits that can be obtained in no other way.

SHERMAN'S BACTERINS

Preparations with a Record for RELIABILITY 40 Different Varieties
TYPHOID FEVER yields more readily to TYPHOID VACCINE than to any
other remedy. When given early it often aborts the course of the disease.
Write for Literature. G. H. SHERMAN, M. D. DETROIT, MICH

When you write to advertisers, please mention The Dietetic and Hygienic Gazette

GLYCO-THYMOLINE FOR COLDS.

At this season of the year the crop of "colds" becomes very numerous.

One of the first efforts of the physician aims at relieving the congestion of the nasal mucous membrane and bring some

degree of comfort to his patient.

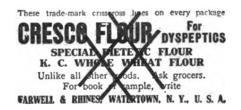
Glyco-Thymoline in a 25 per cent. solution used in connection with the K. & O. Nasal Douche, not only cleanses the nasal passages of the mucous secretions but also reduces the congestion by its exosmotic action, thereby giving the patient a degree of comfort that will be thoroughly appreciated.

PROPHYLAXIS AGAINST "COLDS".

In the case of a great many persons who each winter suffer severely from "colds", even involving the smaller bronchi, one of the most successful means of guarding against such infection is the systematic use of Cord. Ext. Ol. Morrhuae Comp. (Hagee) during the winter season.

By means of this cod liver oil product, which is exceptionally palatable, the tissues, particularly the tissues of the respiratory tract, are increased in resisting power against micropic invasion, in which phenomenon, of course, is to be sought the explanation of the power of Cord. Ext. Ol. Morrhuae Comp. (Hagee) to reduce the likelihood of "colds".

Great Bear Spring Water







TEL. MAD. SQ. 5109
OFFICE BOURS
8 A. M. TO 7 P. M.
SUNDAYS BY
APPOINTMENT

THE LIEDERBACH CO.

Optometrists and Opticians

Glasses Furnished Only When Needed Complicated Cases Solicted. No Guesswork Special Test for Children

343 THIRD AVENUE

Between 25th and 26th Streets NEW YORK CITY

Special Discount to Nurses

SAL HEPATICA

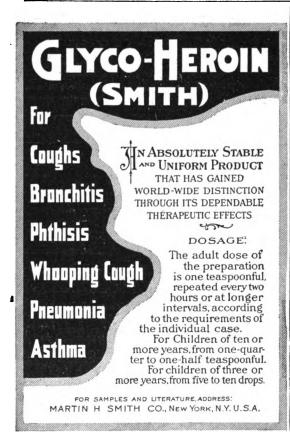
We solicit the careful consideration of the physicians to the merits
of Sai Hepatica in the treatment
of Rheumatism, in Constipation
and Auto-intoxication, and to its
highly important property of
cleansing the entire alimentary
tract, thereby eliminating and preventing the absorption of 'rivitating
toxins and relieving the conditions
arising from indiscretion in eating
and drinking.

Write for free sample.

BRISTOL-MYERS CO.

Manufacturing Chemists
277-281 Greene Avenue,
Brooklyn, New York, U.S.A.





ROMEIKE'S Press Clipping Bureau

Press Clippings are always interesting and profitable, they are indispensable to professional and business men alike. Authors, artists, actors, singers and society leaders are supplied with reviews and criticisms.

We collect obituary notices and bind them in scrapbooks.

Lawyers, bankers, brokers, financial institutes depend largely on quick information from the columns of the press; we supply them.

To the manufacturer we show through the Clippings new markets for his products.

The inventor, the politician, the social reformer, in fact all who attract the attention of the press, are informed and kept up to date by Press Clippings.

A postal card will bring all the information

HENRY ROMEIKE, Inc.

106-110 Seventh Ave. New York City
Telephone: 929 Chelsea

GLYCO-THYMOLINE IN TYPHOID FEVER.

To keep the alimentary tract as free as possible from fermentable matter, to inhibit as far as possible the activity of the putrefactive bacteria which normally inhabit the intestinal canal, and to eliminate the toxin produced by the Bacillus Typhosus as rapidly as possible are desirable re-

sults to accomplish in treating Typhoid cases.

The power of Glyco-Thymoline to produce these results is amply proven by clinical reports from eminent physicians in all parts of the country.

The distressing condition of fissured tongue and "cracked" lips is immediately relieved and the sordes of teeth and mouth quickly removed by the use of Glyco-Thymoline.

Chronic Constipation

can often be relieved and overcome by

PRUNOIDS

when all other measures have been "tried and found wanting."

Prunoids act by stimulating natural functions, and in consequence, are notably free from the drawbacks of usual cathartics.

DIRECTIONS—One or two at bedtime.

Samples on request.

SULTAN DRUG CO., St. Louis, Mo.

resolute Pneumonia, Asthma, Sore Throat, and the bronchial complications incident to

for Whooping Cough, Spasmodic Croup, Bronchitis, Broncho

Scarlet Fever and Measles.

Vaporized Cresolene is destructive to Diphtheria bacilli and may be advantageously used in connection with the treatment of this disease.

Cresolene has twice the germicidal value of carbolic acid, and is less The vapor is harmless to the youngest child. The accompanying vaporizer offers a means of easy and prolonged treatment.

Let us send you our descriptive and test booklet which gives liberal sample offer.

THE VAPO-CRESOLENE CO., 62 Cortlandt Street, NEW YORK
Leeming-Miles Building, Montreal, Canada



SPECIFY THE BRAND!

Every now and then one is forcibly reminded of the fact that the pharmaceutical market of to-day contains many so-called therapeutic agents of doubtful medicinal value—agents of indefinite and varying po-The point was well brought out, not so very long ago, by a certain chemist who purchased in the open market ten samples of tincture of opium in which the content of morphine varied from 2.7 to 22.8 per cent. Of three tinctures of aconite which he examined, one was found to contain 9 per cent. more of aconite than the standard required, and another 20 per cent. Two specimens of fluid extract of the same drug contained 18.5 per cent. and 25.5 per cent. more, respectively, of the alkaloid than is officially required. Samples of belladonna showed 11.5 per cent. less of mydriatic alkaloids in the fluid extract of the root, and 17 per cent. more in the tincture of the leaves. Some tinctures and fluid extracts of nux vomica revealed an excess of strychnine—in one case of 19 per cent.

The foregoing facts are called to mind by an announcement which is appearing in medical journals over the signature of Parke, Davis & Co., bearing the title, "Fluid Extracts and Tinctures of Definite Potency," and opening with this significant question: "When writing a prescription for a fluid extract or tincture, what assurance have you that the product dispensed will be medicinally efficient?—that it will be active, yet not too active?—that it will produce the therapeutic result that you hope for and expect?"

It is well known that Parke, Davis & Co. are authoritative upon the subject of standardization, chemical and physiological, and it may be confidently asserted that the practitioner of medicine who reads and ponders what is said in the announcement referred to will find that his time has been well expended. The physician's obligation to his patient, it should be remembered, does not cease with the writing of a prescription. There remains the further duty to assure himself that trustworthy products are used in compounding that prescription. he prescribes a fluid extract or tincture the physician owes it to his patient to specify the brand—the brand of a reliable manufacturer.

GASTROGEN **TABLETS**

A NEUTRALIZING DIGESTIVE

Sample and formula mailed to physicians upon request.

BRISTOL-MYERS CO.,

277-281 Greene Avenue, BROOKLYN-NEW YORK, U. S. A.



DOCTOR:

Try

FIRWEIN

Bronchial Affections

FREE SAMPLES TO THE PROPESSION UPON APPLICATION

NEW LEBANON, N. Y.

THE TILDEN COMPANY Manufacturing Pharmacists and Chem

ST. LOUIS, MO.



NEURILLA FOR NERVE DISORDERS NEURILLA Patient suffers from THE BLUES (Nerve Exhaustion), Nervous Insomnia, Nervous Headache, Irritability or General Nervousness, sive four times a day one teaspoonful NEURILLA
In nervous fretfulness of teething Children give five to twenty drops.

DAD CHEMICAL COMPANY, NEW YORK and PARIS.



VASO-MOTOR DERANGEMENTS.

The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functional ailments that the modern physician is called upon to correct. heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vaso-motor or circulatory system is not the least of the qualities that account for its widespread The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation.

By a Special Arrangement with the publisher of "WILD OATS"

by James Oppenheim, we are enabled to offer that popular novel on the "White Plague" with a year's subscription (new or renewal) for \$1.75.

The Regular postpaid price of "Wild Oats" is] - -Subscription to "The Dietetic and Hygienic Gazette" 1.00 \$2.30

The success of Brieux's play, "Damaged Goods," was anticipated in this country by "Wild Oats," which was published before a translation of the great French drama appeared

"Wild Oats" has the approval and endorsement of the leaders in the movement to encourage the study of sex hygiene, for they have appreciated the wholesome directness and scientific accuracy of the author, who

however, sacrifices none of the fictional interest in the narrative.

EDWARD BOK, Editor of The Ladies' Home Journal, writes a Foreword to "WILD OATS."

In it he says: "It may be that the work of arousing the public conscience on the great evils that threaten the very foundations of our social structure, is in the bands of the fictionist. This has unquestionably been true in the past. If it be true of the present evil, may this story speak its great vibrant message in clarion tones.

The GAZETTE and the book may be sent to different addresses if desired. The subscription may be a new one or your present subscription may be extended one year. Send \$1.75, together with the names to which you wish the paper and the book sent, to

Subscription Department, The Dietetic and Hygienic Gazette,

87 Nassau Street, New York

Diabetic Patients For

F OOD is more important than medicine. This is also the case with all who are troubled with Urle Acid, Obesity, Rheumatisms, Kidney Trouble and Starch Indigestion. Strength giving foods are important. Something must be given to build up the waste tissues and take the place of the foods that have been eliminated from the diet of such patients. patients.

Practically the only food from which this can be obtained is genuine gluten, which is obtained only in one way—by washing it out of the wheat, the process used only in a wheat starch factory.

Hoyt's Gum Gluten Products are

made in the wheat starch factory of the Arthur S. Hoyt Co. They are carefully prepared and are put up in various forms as Flour, Breakfast Food, Biscuit Crispa, etc. These have been found palatable and acceptable to the patients affording a greater variety than has heretofore been accessible.

Hoyt's Gum Gluten Products are guaranteed in every case to fully meet the requirements of the United States Government

Standard for gluten.

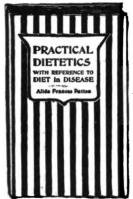
Physicians who want to be sure of results, should in every case carefully and explicitly prescribe only Hoyt's Gum Gluten and see that it is used instead of the many so called gluten products that are not reliable.

end for nearest agent's name and address,

diet-list and samples.

The Pure Gluten Food Co. **New York City** 90 W. Broadway,





Pattee's Practical Dietetics

CONTAINS

DIET LISTS

WHAT TO EAT——WHAT TO AVOID

In specific diseases advised by leading physicians and hospitals in America. It also gives explicit directions for preparing the different foods and appropriate diet for the different ages and conditions.

HIS BOOK has been revised to meet the growing tendency of the physician to prescribe the exact food value of a diet. The energy values of recipes have been given, also a table showing the food value of foodstuffs in the small quantities generally used in cookery for the sick.

This will be useful to the physician or nurse in computing other food combinations, and in calculating the amount of protein, fat or carbohydrate in any dietary without the tedious mathematical processes usually involved in such operations.

It is the only work on the market containing this very useful data in practical form, and it will prove invaluable for anyone interested in the subject of diet,

> Seventh Edition, Revised and Enlarged, 12mo, 550 pages. Price, \$1.50 Post Paid. Special price quoted on quantity to schools and hospitals.

A. E. PATTEE, Publisher and Bookseller, Mt. Vernon, N. Y.

No Advance in the Price of FELLOWS' SYRUP as a Result of the War

Notwithstanding the great scarcity of some of the ingredients of Fellows' Syrup, its quality and uniformity will be strictly maintained and its price will not be increased at present, the Proprietors themselves assuming the considerable extra expense which its compounding now entails.

Reject Cheap and Inefficient Substitutes
Preparations "Just as Good"

The Fellows Medical Manufacturing Co., Ltd., 26 Christopher Street, New York.

KUMYSS

Kumyss is the best obtainable milk, fermented with a little necessary cane sugar, and replaces to the greatest advantage unchanged milk whenever the latter does not agree.

Kumyss is both a food and a refreshing beverage; it is highly acceptable to the fevered patient and will alone sustain life until the full diet is resumed.

Containing 0.55% of the lactic ferment, it tends to ascepticise the bowel and so prevent autointoxication. It is absorbed with promptness and ease, creates no curds, and will not constipate. It solves every problem of the invalid's diet, including the sick child's.

For chronic invalids nothing is superior to Kumyss; in direct inflammations of the gastric mucosa it is often the only agent that will be retained.

It has been the sole beverage for over seven centuries of one of the healthiest races of men—the Kirghis of Russia.

Genuine Kumyss is sold only in bottles, stoppered with crown caps, bearing the well known trademark and the words "Dr. Brush's Kumyss." Be careful to prescribe the genuine, for it never disagrees.

E. F. BRUSH, M.D.,

Mount Vernon, N.Y.







BOUND

JUL 13 1916.

UNIV. OF MICH.



